

**RESOLUTIONS
ADOPTED AND OTHER
RELEVANT DECISIONS
TAKEN DURING THE
66th REGULAR SESSION
OF THE GENERAL
CONFERENCE**

26–30 SEPTEMBER 2022

**RESOLUTIONS ADOPTED BY THE GENERAL CONFERENCE DURING
ITS SIXTY-SIXTH REGULAR SESSION
(26–30 SEPTEMBER 2022)**

Agenda item	Resolution number	Subject	Resolution in
9	GC(66)/RES/1	The Agency's Financial Statements for 2021	GC(66)/3 (page i)
10	GC(66)/RES/2	A. Regular Budget Appropriations for 2023	GC(66)/L.8
10	GC(66)/RES/3	B. Technical Cooperation Fund Allocation for 2023	GC(66)/L.8
10	GC(66)/RES/4	C. The Working Capital Fund for 2023	GC(66)/L.8
12	GC(66)/RES/5	Scale of assessment of Member States' contributions towards the Regular Budget for 2023	GC(66)/11 (pages 3–7)
13	GC(66)/RES/6	Nuclear and radiation safety	GC(66)/L.10
14	GC(66)/RES/7	Nuclear security	GC(66)/COM.5/L.17/Rev.1 and Corr.1.
15	GC(66)/RES/8	Strengthening of the Agency's technical cooperation activities	GC(66)/L.5
16	GC(66)/RES/9	Strengthening the Agency's activities related to nuclear science, technology and applications	GC(66)/L.6
17	GC(66)/RES/10	Strengthening the effectiveness and improving the efficiency of Agency safeguards	GC(66)/L.9
18	GC(66)/RES/11	Implementation of the NPT safeguards agreement between the Agency and the Democratic People's Republic of Korea	GC(66)/L.3
19	GC(66)/RES/12	Application of IAEA safeguards in the Middle East	GC(65)/L.2
25	GC(66)/RES/13	Examination of Delegates' Credentials	GC(66)/18
25	GC(66)/RES/14	Examination of Delegates' Credentials	GC(66)/23

**OTHER RELEVANT DECISIONS TAKEN BY THE
GENERAL CONFERENCE DURING ITS SIXTY-SIXTH REGULAR SESSION
(26–30 SEPTEMBER 2022)**

Agenda item	Decision number	Subject	Decision	
1	GC(66)/DEC/1	Election of the President	Election of HE Mr Alessandro Cortese (Italy)	
1	GC(66)/DEC/2	Election of the Vice-Presidents	Election of the delegates of Australia, Canada, China, Costa Rica, Ghana, Romania, Sweden and Yemen	
1	GC(66)/DEC/3	Election of the Chair of the Committee of the Whole	Election of Mr Mandlenkosi Lunga Bengu (South Africa)	
1	GC(66)/DEC/4	Election of additional members of the General Committee	Election of the delegates of Albania, Montenegro, Paraguay, Switzerland and the United Arab Emirates	
5	GC(66)/DEC/5	Adoption of the agenda and allocation of items for initial discussion	GC(66)/17	
5	GC(66)/DEC/6	Closing date of the session	30 September 2022	
5	GC(66)/DEC/7	Opening date of the sixty-seventh regular session of the General Conference	25 September 2023	
9	GC(66)/DEC/8	Election of Members to the Board of Governors (for 2022–2024)	<u>Area</u>	<u>Member States</u>
			Latin America	Brazil, Costa Rica, Uruguay
			Western Europe	Denmark, Türkiye
			Eastern Europe	Bulgaria
			Africa	Kenya, Namibia
			Middle East and South Asia	Qatar
			South East Asia and the Pacific	Singapore
			Floating seat	Saudi Arabia
10	GC(66)/DEC/9	The Agency's Budget Update for 2023	Took note of the information contained in document GC(66)/INF/13	
11	GC(66)/DEC/10	Amendment to Article XIV.A of the Statute	GC(66)/L.7	

Agenda item	Decision number	Subject	Decision
21	GC(66)/DEC/11	Promotion of efficiency and effectiveness of the IAEA decision making process	Took note of the report of the Chair of the Committee of the Whole
23	GC(66)/DEC/12	Restoration of sovereign equality in the IAEA	Took note of the report of the Chair of the Committee of the Whole

General Conference

GC(66)/RES/1

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 9 of the agenda

(GC(66)/17)

The Agency's Financial Statements for 2021

Resolution adopted on 29 September 2022 during the seventh plenary meeting

The General Conference,

Having regard to Financial Regulation 11.03(b),

Takes note of the report of the External Auditor on the Agency's financial statements for the year 2021 and of the report of the Board of Governors thereon* .

General Conference

GC(66)/RES/2

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 10 of the agenda

(GC(66)/17)

Regular Budget Appropriations for 2023

Resolution adopted on 30 September 2022 during the eleventh plenary meeting

The General Conference,

Accepting the recommendations of the Board of Governors relating to the Regular Budget of the Agency for 2023,¹ while reaffirming, in this context, the effectiveness and integrity of all the relevant provisions in the Statute,

¹ Document GC(66)/6.

1. Appropriates, on the basis of an exchange rate of US \$1.00 to €1.00, an amount of €400 009 616 for the operational portion of the Regular Budget expenses of the Agency in 2023 as follows:²

	€
1. Nuclear Power, Fuel Cycle and Nuclear Science	43 518 019
2. Nuclear Techniques for Development and Environmental Protection	44 255 066
3. Nuclear Safety and Security	38 974 708
4. Nuclear Verification	156 269 439
5. Policy, Management and Administration Services	85 720 457
6. Management of Technical Cooperation for Development	28 090 375
Subtotal of Major Programmes	<hr/> 396 828 064
7. Reimbursable work for others	3 181 552
TOTAL	<hr/> 400 009 616 <hr/>

the amounts in the appropriation sections to be adjusted in accordance with the adjustment formula presented in Attachment A.1 in order to take into account the exchange rate variations during the year;

2. Decides that the foregoing appropriation shall be financed, after the deduction of:

- Revenues deriving from reimbursable work for others (Section 7); and
- Other miscellaneous income of €235 000;

from contributions by Member States amounting, at an exchange rate of US \$1.00 to €1.00, to €396 593 064 (€340 984 693 plus US \$55 608 371), in accordance with the scale of assessment fixed by the General Conference in resolution GC(66)/RES/5;

² Appropriation Sections 1–6 represent the Agency’s Major Programmes.

3. Appropriates, on the basis of an exchange rate of US \$1.00 to €1.00, an amount of €6 205 734 for the capital portion of the Regular Budget expenses of the Agency in 2023 as follows:³

	€
1. Nuclear Power, Fuel Cycle and Nuclear Science	-
2. Nuclear Techniques for Development and Environmental Protection	1 551 433
3. Nuclear Safety and Security	310 287
4. Nuclear Verification	1 034 289
5. Policy, Management and Administration Services	3 309 725
6. Management of Technical Cooperation for Development	-
TOTAL	6 205 734

the amounts in the appropriation sections to be adjusted in accordance with the adjustment formula presented in Attachment A.2 in order to take into account the exchange rate variations during the year;

4. Decides that the foregoing appropriation shall be financed from contributions by Member States amounting, at an exchange rate of US \$1.00 to €1.00, to €6 205 734 (€6 138 815 plus US \$66 919), in accordance with the scale of assessment fixed by the General Conference in resolution GC(66)/RES/5;

5. Authorizes the transfer of the capital portion of the Regular Budget to the Major Capital Investment Fund; and

6. Authorizes the Director General:

- a. To incur expenditures additional to those for which provision is made in the Regular Budget for 2023, provided that the relevant emoluments of any staff involved, and all other costs are entirely financed from revenues arising out of sales, work performed for Member States or international organizations, research grants, special contributions or other sources extraneous to the Regular Budget for 2023; and
- b. With the approval of the Board of Governors, to make transfers between any of the Sections listed in paras 1 and 3 above.

³ See footnote 2.

ATTACHMENT

A.1. APPROPRIATIONS FOR THE OPERATIONAL PORTION OF THE REGULAR BUDGET IN 2023

ADJUSTMENT FORMULA IN EUROS

		€	+ (US\$
1.	Nuclear Power, Fuel Cycle and Nuclear Science	37 008 437		6 509 582 /R)
2.	Nuclear Techniques for Development and Environmental Protection	39 327 630		4 927 436 /R)
3.	Nuclear Safety and Security	31 906 331		7 068 377 /R)
4.	Nuclear Verification	132 110 104		24 159 335 /R)
5.	Policy, Management and Administration Services	76 866 478		8 853 979 /R)
6.	Management of Technical Cooperation for Development	24 000 713		4 089 662 /R)
	Subtotal of Major Programmes	341 219 693		55 608 371 /R)
7.	Reimbursable work for others	3 181 552		- /R)
	TOTAL	344 401 245		55 608 371 /R)

Note: R is the average United Nations dollar to euro exchange rate which will be experienced during 2023.

ATTACHMENT

A.2. APPROPRIATIONS FOR THE CAPITAL PORTION OF THE REGULAR BUDGET IN 2023

ADJUSTMENT FORMULA IN EUROS

	€	US\$
1. Nuclear Power, Fuel Cycle and Nuclear Science	- + (- /R)
2. Nuclear Techniques for Development and Environmental Protection	1 484 514 + (66 919 /R)
3. Nuclear Safety and Security	310 287 + (- /R)
4. Nuclear Verification	1 034 289 + (- /R)
5. Policy, Management and Administration Services	3 309 725 + (- /R)
6. Management of Technical Cooperation for Development	- + (- /R)
TOTAL	<u>6 138 815 + (</u>	<u>66 919 /R)</u>

Note: R is the average United Nations dollar to euro exchange rate which will be experienced during 2023.

General Conference

GC(66)/RES/3

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 10 of the agenda

(GC(66)/17)

Technical Cooperation Fund Allocation for 2023

Resolution adopted on 30 September 2022 during the eleventh plenary meeting

The General Conference,

- (a) Noting the decision of the Board of Governors of June 2021 to recommend the Technical Cooperation Fund target of €92 600 000 for voluntary contributions to the Agency's Technical Cooperation Fund for 2023, and
 - (b) Accepting the foregoing recommendation of the Board,
1. Decides that for 2023 the target figure for voluntary contributions to the Technical Cooperation Fund shall be €92 600 000;
 2. Allocates, in euros, contributions of €92 600 000 for the Agency's technical cooperation programme for 2023; and
 3. Urges all Member States to make voluntary contributions for 2023 in accordance with Article XIV.F of the Statute, with para. 2 of its resolution GC(V)/RES/100 as amended by resolution GC(XV)/RES/286 or with para. 3 of the former resolution, as appropriate.

General Conference

GC(66)/RES/4

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 10 of the agenda

(GC(66)/17)

The Working Capital Fund for 2023

Resolution adopted on 30 September 2022 during the eleventh plenary meeting

The General Conference,

Accepting the recommendations of the Board of Governors relating to the Agency's Working Capital Fund for 2023,

1. Approves a level of €15 210 000 for the Agency's Working Capital Fund for 2023;
2. Decides that the Fund shall be financed, administered and used in 2023 in accordance with the relevant provisions of the Financial Regulations of the Agency;¹
3. Authorizes the Director General to make advances from the Fund not exceeding €500 000 at any time to finance temporarily projects or activities which have been approved by the Board of Governors for which no funds have been provided under the Regular Budget; and
4. Requests the Director General to submit to the Board of Governors statements of advances made from the Fund under the authority given in para. 3 above.

¹ Document INFCIRC/8/Rev.4.

General Conference

GC(66)/RES/5

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 12 of the agenda

(GC(66)/17)

Scale of assessment of Member States' contributions towards the Regular Budget for 2023

Resolution adopted on 29 September 2022 during the seventh plenary meeting

The General Conference,

Applying the principles it has established for the assessment of Member States' contributions towards the Agency's Regular Budget*,

1. Decides that the individual base rates and the resulting scale of assessment of Member States' contributions to the Agency's Regular Budget for 2023 shall be as set forth in Annex 1 hereto; and
2. Determines, pursuant to Financial Regulation 5.09**, that in the event of a State becoming a Member of the Agency during the remainder of 2022 or in 2023 it shall be assessed as appropriate:
 - (a) For an advance or advances to the Working Capital Fund, in accordance with Financial Regulation 7.04**; and
 - (b) For a contribution or contributions towards the Agency's Regular Budget, in accordance with the principles and arrangements the Conference has established for the assessment of Member States for such contributions.

* By resolution GC(III)/RES/50 as amended by resolution GC(XXI)/RES/351, and resolution GC(39)RES/11 as amended by resolutions GC(44)/RES/9 and GC(47)/RES/5.

** INFCIRC/8/Rev.4.

Annex 1
2023 Scale of Assessment

Member State	Base rate %	Scale %	Regular Budget assessment	
			€	\$
Afghanistan	0.006	0.006	19 390	3 080
Albania	0.008	0.008	27 456	4 397
Algeria	0.105	0.104	360 368	57 713
Angola	0.010	0.009	32 316	5 133
Antigua and Barbuda	0.002	0.002	6 943	1 113
Argentina	0.692	0.692	2 402 094	385 273
Armenia	0.007	0.007	24 025	3 847
Australia	2.031	2.039	7 078 012	1 135 834
Austria	0.653	0.656	2 275 703	365 190
Azerbaijan	0.029	0.029	99 530	15 940
Bahamas	0.018	0.018	62 482	10 022
Bahrain	0.052	0.052	180 504	28 951
Bangladesh	0.010	0.009	32 316	5 133
Barbados	0.008	0.008	27 770	4 454
Belarus	0.039	0.039	133 851	21 436
Belgium	0.796	0.799	2 774 048	445 161
Belize	0.001	0.001	3 432	549
Benin	0.005	0.005	16 158	2 567
Bolivia, Plurinational State of	0.018	0.018	61 777	9 894
Bosnia and Herzegovina	0.011	0.011	37 753	6 046
Botswana	0.014	0.014	48 049	7 695
Brazil	1.937	1.937	6 723 782	1 078 430
Brunei Darussalam	0.020	0.020	69 425	11 135
Bulgaria	0.054	0.053	185 332	29 681
Burkina Faso	0.004	0.004	12 926	2 053
Burundi	0.001	0.001	3 232	513
Cambodia	0.007	0.007	22 621	3 593
Cameroon	0.012	0.012	41 184	6 596
Canada	2.528	2.538	8 810 057	1 413 781
Central African Republic	0.001	0.001	3 232	513
Chad	0.003	0.003	9 694	1 539
Chile	0.404	0.404	1 402 379	224 928
China	14.676	14.506	50 369 166	8 066 630
Colombia	0.237	0.234	813 403	130 267
Comoros	0.001	0.001	3 232	513
Congo	0.005	0.005	17 356	2 784
Costa Rica	0.066	0.065	226 517	36 277
Côte d'Ivoire	0.021	0.021	72 074	11 542
Croatia	0.087	0.086	298 591	47 819
Cuba	0.091	0.090	312 319	50 018
Cyprus	0.035	0.035	121 976	19 574
Czech Republic	0.327	0.327	1 135 094	182 058
Democratic Republic of the Congo	0.010	0.009	32 316	5 133
Denmark	0.532	0.534	1 854 012	297 520
Djibouti	0.001	0.001	3 232	513
Dominica	0.001	0.001	3 471	557
Dominican Republic	0.064	0.063	219 653	35 177
Ecuador	0.074	0.073	253 974	40 674
Egypt	0.134	0.132	459 898	73 652
El Salvador	0.012	0.012	41 184	6 596

Annex 1
2023 Scale of Assessment

Member State	Base rate %	Scale %	Regular Budget assessment		
			€	+	\$
Eritrea	0.001	0.001	3 232		513
Estonia	0.042	0.042	144 147		23 085
Eswatini	0.002	0.002	6 943		1 113
Ethiopia	0.010	0.009	32 316		5 133
Fiji	0.004	0.004	13 885		2 227
Finland	0.401	0.403	1 397 479		224 259
France	4.154	4.171	14 476 647		2 323 120
Gabon	0.012	0.012	41 654		6 681
Georgia	0.008	0.008	27 456		4 397
Germany	5.879	5.902	20 488 256		3 287 825
Ghana	0.023	0.023	78 938		12 642
Greece	0.313	0.313	1 086 497		174 264
Grenada	0.001	0.001	3 471		557
Guatemala	0.039	0.039	133 851		21 436
Guyana	0.004	0.004	13 885		2 227
Haiti	0.006	0.006	19 390		3 080
Holy See	0.001	0.001	3 481		558
Honduras	0.009	0.009	30 889		4 946
Hungary	0.219	0.219	760 200		121 929
Iceland	0.035	0.035	121 976		19 574
India	1.004	0.992	3 445 805		551 846
Indonesia	0.528	0.522	1 812 137		290 214
Iran, Islamic Republic of	0.357	0.353	1 225 251		196 224
Iraq	0.123	0.122	422 145		67 607
Ireland	0.422	0.424	1 470 663		236 002
Israel	0.540	0.542	1 881 893		301 994
Italy	3.068	3.080	10 691 950		1 715 775
Jamaica	0.008	0.008	27 456		4 397
Japan	7.728	7.758	26 932 007		4 321 878
Jordan	0.021	0.021	72 074		11 542
Kazakhstan	0.128	0.127	439 306		70 354
Kenya	0.029	0.029	99 530		15 940
Korea, Republic of	2.476	2.476	8 594 778		1 378 520
Kuwait	0.225	0.226	784 119		125 830
Kyrgyzstan	0.002	0.002	6 865		1 099
Lao People's Democratic Republic	0.007	0.007	22 621		3 593
Latvia	0.048	0.047	164 740		26 383
Lebanon	0.035	0.035	120 123		19 238
Lesotho	0.001	0.001	3 232		513
Liberia	0.001	0.001	3 232		513
Libya	0.017	0.017	59 011		9 465
Liechtenstein	0.010	0.010	34 852		5 593
Lithuania	0.074	0.073	253 974		40 674
Luxembourg	0.065	0.065	226 521		36 350
Madagascar	0.004	0.004	12 926		2 053
Malawi	0.002	0.002	6 464		1 026
Malaysia	0.335	0.335	1 162 864		186 512
Mali	0.005	0.005	16 158		2 567
Malta	0.018	0.018	62 482		10 022
Marshall Islands	0.001	0.001	3 432		549

Annex 1
2023 Scale of Assessment

Member State	Base rate %	Scale %	Regular Budget assessment	
			€	\$
Mauritania	0.002	0.002	6 464	1 026
Mauritius	0.018	0.018	61 777	9 894
Mexico	1.175	1.175	4 078 702	654 184
Monaco	0.010	0.010	34 852	5 593
Mongolia	0.004	0.004	13 728	2 199
Montenegro	0.004	0.004	13 728	2 199
Morocco	0.053	0.052	181 900	29 131
Mozambique	0.004	0.004	12 926	2 053
Myanmar	0.010	0.009	32 316	5 133
Namibia	0.009	0.009	30 889	4 946
Nepal	0.010	0.009	32 316	5 133
Netherlands	1.325	1.330	4 617 609	741 004
New Zealand	0.297	0.298	1 035 041	166 096
Nicaragua	0.005	0.005	16 158	2 567
Niger	0.003	0.003	9 694	1 539
Nigeria	0.175	0.173	600 613	96 188
North Macedonia	0.007	0.007	24 025	3 847
Norway	0.653	0.656	2 275 703	365 190
Oman	0.107	0.107	371 423	59 572
Pakistan	0.110	0.109	377 528	60 462
Palau	0.001	0.001	3 471	557
Panama	0.086	0.085	295 159	47 270
Papua New Guinea	0.010	0.010	34 712	5 568
Paraguay	0.025	0.025	85 802	13 741
Peru	0.157	0.155	538 836	86 295
Philippines	0.204	0.202	700 143	112 129
Poland	0.805	0.796	2 762 822	442 466
Portugal	0.339	0.339	1 176 748	188 739
Qatar	0.259	0.260	902 615	144 846
Republic of Moldova	0.005	0.005	17 160	2 748
Romania	0.300	0.297	1 029 623	164 894
Russian Federation	1.795	1.802	6 255 560	1 003 852
Rwanda	0.003	0.003	9 694	1 539
Saint Kitts and Nevis	0.002	0.002	6 943	1 113
Saint Lucia	0.002	0.002	6 943	1 113
Saint Vincent and the Grenadines	0.001	0.001	3 471	557
Samoa	0.001	0.001	3 471	557
San Marino	0.002	0.002	6 943	1 113
Saudi Arabia	1.139	1.139	3 953 737	634 142
Senegal	0.007	0.007	22 621	3 593
Serbia	0.031	0.031	106 395	17 039
Seychelles	0.002	0.002	6 943	1 113
Sierra Leone	0.001	0.001	3 232	513
Singapore	0.485	0.487	1 690 224	271 236
Slovakia	0.149	0.147	511 380	81 898
Slovenia	0.076	0.076	264 863	42 503
South Africa	0.235	0.232	806 538	129 167
Spain	2.053	2.061	7 154 685	1 148 138
Sri Lanka	0.043	0.043	147 579	23 635
Sudan	0.010	0.009	32 316	5 133

Annex 1

2023 Scale of Assessment

Member State	Base rate %	Scale %	Regular Budget assessment		
			€	+	\$
Sweden	0.838	0.841	2 920 425		468 651
Switzerland	1.091	1.095	3 802 128		610 141
Syrian Arab Republic	0.009	0.009	30 889		4 946
Tajikistan	0.003	0.003	10 296		1 648
Thailand	0.354	0.350	1 214 955		194 575
Togo	0.002	0.002	6 464		1 026
Tonga	0.001	0.001	3 471		557
Trinidad and Tobago	0.035	0.035	121 494		19 487
Tunisia	0.018	0.018	61 777		9 894
Turkmenistan	0.033	0.033	114 551		18 373
Türkiye	0.813	0.804	2 790 279		446 864
Uganda	0.010	0.009	32 316		5 133
Ukraine	0.054	0.053	185 332		29 681
United Arab Emirates	0.611	0.613	2 129 326		341 700
United Kingdom of Great Britain and Northern Ireland	4.209	4.225	14 668 327		2 353 881
United Republic of Tanzania	0.010	0.009	32 316		5 133
United States of America	25.000	25.100	87 124 765		13 981 226
Uruguay	0.088	0.088	305 469		48 994
Uzbekistan	0.026	0.026	89 234		14 291
Vanuatu	0.001	0.001	3 232		513
Venezuela, Bolivarian Republic of	0.168	0.166	576 589		92 341
Viet Nam	0.089	0.083	287 610		45 680
Yemen	0.008	0.007	25 852		4 106
Zambia	0.008	0.007	25 852		4 106
Zimbabwe	0.007	0.007	24 025		3 847
TOTAL	100.000	100.000	347 123 508	[a]	55 675 290 [a]

[a] See document GC(66)/6, The Agency's Budget Update for 2023.

General Conference

GC(66)/RES/6

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 13 of the agenda
(GC(66)/17)

Nuclear and radiation safety

Resolution adopted on 30 September 2022 during the eleventh plenary meeting

The General Conference,

- (a) Recalling resolution GC(65)/RES/8 and previous General Conference resolutions on matters relating to measures to strengthen international cooperation in nuclear, radiation, transport and waste safety, and emergency preparedness and response,
- (b) Acknowledging the Agency's statutory functions with respect to safety and welcoming the activities of the Agency in establishing Safety Standards,
- (c) Recognizing the central role of the Agency in coordinating international efforts to strengthen nuclear safety globally, in providing expertise and advice in this field and in promoting nuclear safety,
- (d) Recognizing that strengthening nuclear safety globally requires the resolve of Member States to continuous improvement in the pursuit of high levels of safety,
- (e) Recognizing the increasing number of countries considering or introducing nuclear power or radiation technology, and the growing importance of international cooperation to strengthen nuclear safety in this regard, including among embarking countries, those with established nuclear power programmes, and industry organizations,
- (f) Recognizing the need to continue providing appropriate technical, human and financial resources for the Agency to implement its nuclear safety activities and to enable the Agency to provide, upon request, the support needed by Member States,
- (g) Recognizing that embedding and enhancing safety culture is a key element of the peaceful uses of nuclear energy, ionizing radiation and radioactive materials,
- (h) Recognizing that nuclear safety and security have the common aim of protecting people and the environment, while acknowledging the distinctions between the two areas, and affirming the importance of coordination in this regard,

- (i) Noting GC(XXXIV)/RES/533 and GC(XXIX)/RES/444 regarding attacks against nuclear facilities devoted to peaceful purposes, and GC(53)/DEC/13 which recognized the importance attached to safety, security and physical protection of nuclear material and nuclear facilities, and emphasizing the importance of nuclear safety and security regarding peaceful nuclear facilities and materials in all circumstances, and, without prejudice to the views of Member States, noting the IAEA Director General's "seven indispensable pillars for ensuring nuclear safety and security during an armed conflict, which derive from the IAEA safety standards and nuclear security guidance", advanced on 2 March 2022,
- (j) Recognizing the prime responsibility of licence holders for nuclear safety,
- (k) Recognizing the importance of Member States establishing and maintaining effective and sustainable regulatory infrastructures,
- (l) Acknowledging that research, development, the introduction of innovative methods and technologies and the availability of research and testing facilities are of continuing and long term fundamental importance in improving nuclear safety worldwide;
- (m) Acknowledging the need to continue to enhance the safety of nuclear installations, including research reactors and nuclear fuel cycle facilities, and other related facilities and activities,
- (n) Recalling the objectives of the Convention on Nuclear Safety (CNS), the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention), the Convention on Early Notification of a Nuclear Accident (Early Notification Convention) and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Assistance Convention) and the obligations of the respective Contracting Parties, and recognizing the need for effective and sustainable implementation of these conventions, and recalling the central role of the IAEA in promoting adherence to all international nuclear safety conventions concluded under its auspices,
- (o) Noting the actions agreed at the 7th Review Meeting of the Contracting Parties to the Convention on Nuclear Safety to strengthen the participation in and effectiveness and transparency of the peer review process, the major common issues, good practices, areas of good performance and challenges identified by the Contracting Parties,
- (p) Noting the overarching issues, good practices and areas of good performance identified by the Contracting Parties at the 7th Review Meeting of the Joint Convention,
- (q) Recalling the objectives of the Code of Conduct on the Safety of Research Reactors as well as the Code of Conduct on the Safety and Security of Radioactive Sources and its Guidance on the Import and Export of Radioactive Sources and its Guidance on the Management of Disused Radioactive Sources,
- (r) Recalling that States, under international law, have the obligation to protect and preserve the environment, including the marine and terrestrial environment, and emphasizing the importance of the Secretariat's continued collaboration with the Contracting Parties of international and regional instruments aimed at protecting the environment from radioactive wastes, in particular the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the London Convention) and Protocol and the Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention),

- (s) Recognizing that, historically, the safety record of civilian transport, including maritime transport, of radioactive materials has been excellent, and stressing the importance of international cooperation, to further enhance the safety and security of international transport,
- (t) Recognizing that denials of and delays in shipment of nuclear and radioactive materials can affect the provision of medical treatment and diagnosis, the selection of routes and modes of shipment, and the predictability of transport,
- (u) Noting the need for the Agency to continue to keep abreast of safety matters related to scientific and technological innovations, including with regard to transportable nuclear power plants (TNPPs) and small and medium sized or modular reactors (SMRs),
- (v) Noting that there are ongoing projects to construct and deploy transportable nuclear power plants and small and medium or modular reactors, and also noting that these installations should be developed and operated pursuant to the existing safety frameworks for nuclear power plants,
- (w) Noting the launch of the Agency-wide Platform on SMRs and their Applications to ensure a cross departmental approach and to provide integrated support, where applicable, to Member States, upon request, on all aspects of the safe and secure development and deployment of SMRs and advanced nuclear reactors, and further noting the launch of the IAEA Nuclear Harmonization and Standardization Initiative (NHSI),
- (x) Recalling maritime and air navigation rights and freedoms, as provided for in international law and as reflected in relevant international instruments,
- (y) Recalling resolution GC(65)/RES/8 and previous resolutions that invited Member States shipping radioactive material to provide, as appropriate, assurances to potentially affected States, upon their request, that their national regulations take into account the Agency's Regulations for the Safe Transport of Radioactive Material and to provide them with relevant information relating to shipments of such material,
- (z) Recalling the issuing of the Best Practices for Voluntary and Confidential Government to Government Communications on the Transport of MOX Fuel, High Level Radioactive Waste and, as appropriate, Irradiated Nuclear Fuel by Sea (INFCIRC/863) in 2014,
- (aa) Recognizing that transparent communication with and outreach to the public and interested parties enhances public awareness regarding nuclear safety and benefits derived from and potential effects of ionizing radiation,
- (bb) Recognizing that nuclear and radiological incidents, accidents and emergencies may raise public concerns about nuclear energy and about the effects of radiation on present and future generations and the environment, and that some emergencies may have transboundary effects,
- (cc) Emphasizing the importance of Member States and relevant international organizations responding to nuclear and radiological emergencies, in a timely, effective and transparent manner,
- (dd) Recognizing the importance of well-developed communication arrangements and regular public information as an important component of effective planning and preparedness for and response to nuclear accidents and radiological emergencies,
- (ee) Acknowledging the Secretariat's role in response to nuclear or radiological incidents or emergencies and recognizing the need to ensure the timeliness of the collection, validation, assessment and prognosis, and dissemination by the Secretariat, in cooperation with the notifying State, of incident or emergency information to Member States and the public, as well as seeking effective facilitation and coordination of assistance by the Secretariat, upon request,

- (ff) Recognizing that nuclear accidents and subsequent protective actions may have serious long-term effects on people's health and well-being, including mental health and non-radiological health impacts, and that these deserve due consideration together with potential radiation exposure,
- (gg) Emphasizing the importance of capacity building, which should, among other things, take into consideration lessons learned and expertise, in establishing and maintaining an adequate nuclear, radiation, transport and waste safety and emergency preparedness infrastructure,
- (hh) Recalling the IAEA Fundamental Safety Principles, according to which radioactive waste must be managed in such a way as to avoid imposing an undue burden on future generations, and emphasizing the importance of the development of national long-term programmes or approaches for the safe management of spent fuel and radioactive waste, including for waste disposal and storage, where appropriate, containing outcomes which are achievable and timely,
- (ii) Reaffirming the importance of planning and implementing long-term safe management for spent fuel and radioactive waste, alongside ensuring that spent fuel and radioactive waste management practices are practicable, and adequately protect individuals, society and the environment against radiological hazards,
- (jj) Recognizing the importance of Member States voluntarily performing self-assessments and using the Agency's peer review services as effective tools for continued efforts to evaluate, maintain effective practices and further improve their respective nuclear safety,
- (kk) Recognizing that regional organizations of regulatory authorities strengthen regional efforts to improve safety through the exchange of information and experience, and recognizing also the transparent cross peer reviews among the respective members of the Ibero-American Forum of Radiological and Nuclear Regulatory Agencies (FORO) and the European Nuclear Safety Regulators Group (ENSREG) and the Western European Nuclear Regulators' Association (WENRA) of targeted reassessments of their nuclear power plants in the light of the Fukushima Daiichi nuclear power plant accident, and further recognizing that such activities can be of interest to other organizations or regulatory authorities,
- (ll) Underscoring that medical uses of ionizing radiation constitute by far the largest source of artificial exposure, and emphasizing the need for enhanced efforts at national level to justify medical exposures, and to optimize radiation protection for patients and health workers,
- (mm) Recognizing the need to enhance cooperation and coordination between the Agency and the relevant organizations at the intergovernmental, national, regional and international levels on all nuclear safety-related matters,
- (nn) Emphasizing the importance of the establishment, implementation, regular exercise and continuous improvement of relevant national, bilateral, regional and international emergency preparedness and response mechanisms and arrangements, and contributing to the harmonization of national protective actions and other response actions within their State as outlined in GSR Part 7,
- (oo) Emphasizing the need to prepare for decontamination or remediation following a nuclear or radiological incident, accident or emergency, which may involve planning for the safe management of large volumes of waste or unusual waste forms,
- (pp) Noting the importance of decommissioning programmes and spent fuel and radioactive waste management activities as facilities reach end of life,

(qq) Recalling United Nations General Assembly resolution A/RES/76/75 of 9 December 2021 related to the effects of atomic radiation, and the Board decision in March 1960 on health and safety measures (INFCIRC/18/Rev.1),

(rr) Noting the guidance of the World Health Organization (WHO) for controlling radionuclides in drinking water, and the recent work of the Codex Committee on Contaminants in Food on radionuclides in food and drinking water in non-emergency situations, and also noting the recent document on ‘Exposure Due to Radionuclides in Food Other Than During a Nuclear or Radiological Emergency’ jointly sponsored by the Food and Agriculture Organization of the United Nations (FAO), IAEA and WHO,

(ss) Recalling the Paris Convention on Third Party Liability in the Field of Nuclear Energy, the Vienna Convention on Civil Liability for Nuclear Damage, the Brussels Convention supplementary to the Paris Convention, the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, the protocols amending the Brussels, Paris and Vienna Conventions, and the Convention on Supplementary Compensation for Nuclear Damage (CSC) and noting that these instruments can provide the basis for establishing a global nuclear liability regime based on the principles of nuclear liability;

(tt) Stressing the importance of having in place effective and coherent nuclear liability mechanisms at the national and global levels to ensure prompt, adequate and non-discriminatory compensation for damage to — inter alia — people, property and the environment, including actual economic loss due to a nuclear accident or incident, recognizing that principles of nuclear liability, including strict liability, should apply as appropriate in the event of a nuclear accident or incident, including during the transport of radioactive material, and noting that the principles of nuclear liability can benefit from the advances contained in the 1997 and 2004 instruments concerning broader definition of nuclear damage, expanded jurisdiction over nuclear incidents and increased compensation, and from recommendations made by the International Expert Group on Nuclear Liability (INLEX), to provide better protection to victims of nuclear damage,

(uu) Recognizing the importance of coordination between the Agency and the OECD Nuclear Energy Agency (NEA), when appropriate, with respect to conventions concluded under their auspices related to civil nuclear liability,

(vv) Recalling the convening of the First International Conference on Nuclear Law and noting the importance of Member States cooperating in this field at regional and international levels, as applicable, and

(ww) Recalling the International Conference on a Decade of Progress after Fukushima-Daiichi, convened by the IAEA in November 2021,

1.

General

1. Urges the Agency to continue to strengthen its efforts to maintain and improve nuclear, radiation, transport and waste safety and emergency preparedness and response, and to enhance its support and assistance to Member States, upon their request;

2. Encourages Member States to develop, maintain and improve their nuclear and radiation safety infrastructure and related scientific and technical capabilities, including through international nuclear cooperation; and both requests the Secretariat and encourages Member States in a position to do so, to assist in this regard, upon request, in a coordinated, efficient and sustainable manner;

3. Requests the Secretariat to provide Member States introducing research reactors, radiation technology or a nuclear power programme, upon request in a timely and efficient manner, with guidance on how to use the Agency's safety services in support of the development of their nuclear safety infrastructure;
4. Acknowledges the actions undertaken by Contracting Parties of the CNS, the Joint Convention, the Early Notification Convention and the Assistance Convention in response to the Fukushima Daiichi nuclear power plant accident; recalls the IAEA Action Plan on Nuclear Safety, the IAEA Report on the Fukushima Daiichi nuclear power plant accident, the Vienna Declaration on Nuclear Safety on Principles for the Implementation of the Objective of the CNS to Prevent Accidents and Mitigate Radiological Consequences, and the experience from their implementation by Member States; requests the Agency to continue to build upon them and use them for refining its nuclear safety strategy and programme of work, including priorities, milestones, timelines and performance indicators; and requests that the Secretariat continue to report periodically in this regard in the lead up to the March Board of Governors and the General Conference;
5. Encourages Member States to continue to enhance safety culture at all levels in their nuclear and radiation activities, and requests the Secretariat to support Member States, upon request, in promoting, assessing, and improving safety culture in all relevant organizations, including regulatory body oversight of licensee safety culture, and on practices to promote and sustain the regulatory body's own safety culture;
6. Requests the Secretariat, while recognizing the distinction between nuclear safety and nuclear security, to continue facilitating in close cooperation with Member States a coordination process to address their interfaces in a timely manner, and encourages the Agency to develop safety and security publications, to ensure consistency and to foster culture accordingly;
7. Encourages the Secretariat to coordinate its programmatic activities in safety with other relevant activities of the Agency, and to ensure consistency of safety aspects of relevant IAEA publications;
8. Encourages Member States to join relevant regional safety fora and networks, and to participate and work in cooperation with other members so that the benefits of membership can be fully realized and requests the Secretariat to continue to assist Member States in the establishment, maintenance and functioning of such fora and networks;
9. Requests the Secretariat to strengthen its cooperation with the regional regulatory organizations or expert advisory groups, such as FORO and ENSREG, in areas of mutual interest, and further requests the Secretariat to promote wide dissemination of technical documents and outcomes of projects developed by these organizations, including the outcomes of the FORO Plenary sessions in 2022 and the 6th European Nuclear Safety Conference held under the auspices of ENSREG in 2022;
10. Encourages Member States to continue sharing safety-relevant experiences, findings and lessons learned among regulatory authorities, technical and scientific support organizations, operators and industry, as appropriate with the assistance of the Secretariat to foster such sharing, and to benefit from, as appropriate, interaction within international organizations and fora such as the OECD/NEA and the World Association of Nuclear Operators (WANO);
11. Encourages Member States to continue to communicate effectively to interested parties, including to their general public, about regulatory processes and safety aspects, including health effects, and environmental aspects of facilities and activities, on the basis of scientific data as available, and encourages Member States to provide for consultation with their public as appropriate, and to reach out to the younger generations with clear and concise communications;

12. Encourages the Secretariat and Member States to continue to make effective use of the Agency's technical cooperation resources for the further enhancement of safety;
13. Encourages Member States to exercise effective supply chain management and to increase efforts in detecting non-conforming, counterfeit, fraudulent or suspect items received from suppliers and prevent them from being installed in the facilities;

2.

Conventions, Regulatory Frameworks and Supporting Non-Legally-Binding Instruments for Safety

14. Urges all Member States that have not yet done so, especially those planning, constructing, commissioning or operating nuclear power plants, or considering a nuclear power programme, to become Contracting Parties to the CNS;
15. Urges all Member States that have not yet done so, particularly those managing radioactive waste or spent fuel, to become Contracting Parties to the Joint Convention;
16. Stresses the importance of CNS and Joint Convention Contracting Parties fulfilling their respective obligations stemming from these Conventions and reflecting these in their actions to strengthen nuclear safety and in particular when preparing National Reports, and actively participating in peer reviews for CNS and Joint Convention Review Meetings;
17. Requests the Secretariat to provide full support for the CNS and Joint Convention Review Meetings, and to consider addressing their outcomes in the Agency's activities, as appropriate and in consultation with Member States;
18. Urges all Member States that have not yet done so to become Contracting Parties to the Early Notification Convention and the Assistance Convention, and stresses the importance of Contracting Parties fulfilling the obligations stemming from these Conventions, and actively participating in regular meetings of the Representatives of Competent Authorities;
19. Requests the Secretariat, in collaboration with regional and international organizations and Member States, to continue its activities to promote the importance of conventions concluded under the auspices of the IAEA and to assist Member States upon request with adherence, participation and implementation as well as strengthening of their related technical and administrative procedures;
20. Encourages all Member States to make political commitments to the non-legally binding Code of Conduct on the Safety and Security of Radioactive Sources, and its Guidance on the Import and Export of Radioactive Sources, and its Guidance on the Management of Disused Radioactive Sources, and to implement these, as appropriate, in order to maintain effective safety and security of radioactive sources throughout their life cycle, and requests the Secretariat to continue supporting Member States in this regard;
21. Encourages Member States to apply the guidance of the Code of Conduct on the Safety of Research Reactors at all stages in their life, including planning, and encourages Member States to freely exchange their regulatory and operating information and experience with regard to research reactors;
22. Requests the Secretariat to continue to support Member States, upon request, in application of the guidance of the Code of Conduct on the Safety of Research Reactors;
23. Urges Member States that have not already done so to establish and sustain a regulatory body that is effectively independent in its regulatory decision-making, competent, and has the legal authority, and the appropriate human, financial and technical resources organized as necessary for fulfilling its

responsibilities, and encourages Member States, who have not already done so, to take the appropriate steps to ensure an effective separation between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy and ionizing radiation;

24. Urges Member States to strengthen regulatory effectiveness in the field of nuclear, radiation, transport and waste safety, and emergency preparedness and response, and to continue promoting cooperation and coordination among regulatory bodies within a Member State, as appropriate, and among Member States;

25. Requests the Secretariat, in collaboration with Member States, to continue identifying actions to improve regulatory effectiveness and to report regularly about the progress of actions taken;

26. Requests the Secretariat to help Member States' regulatory bodies, upon request, to establish systematic regulatory experience feedback mechanisms;

27. Encourages Member States to continue to enhance their national regulatory inspection programmes, including, as appropriate, by applying a risk-informed, performance-based and graded approach;

28. Encourages Member States to consider establishing organizations to provide technical and scientific support to regulatory functions, as appropriate, and requests the Secretariat to promote cooperation between Member States, including through the Technical and Scientific Support Organization Forum (TSO Forum) and regional TSO networks, and to assist, upon request, in this regard, including in applying the TSO Self Capability Assessment (TOSCA) methodology;

29. Urges Member States to establish or maintain systematic and robust regulatory decision-making processes that take into account scientific knowledge and expertise, including, where appropriate, from TSOs and other relevant institutions;

30. Encourages the Secretariat to continue communication with Member States on a regular basis regarding the work of the International Nuclear Safety Group (INSAG), its major outcomes and recommendations of INSAG to the Director General;

31. Encourages Member States to give due consideration to the possibility of joining the international nuclear liability instruments, as appropriate, and to work towards establishing a global nuclear liability regime;

32. Requests the Secretariat, in coordination with the OECD/NEA when appropriate, to assist Member States, upon request, in their efforts to adhere to any international nuclear liability instruments concluded under the auspices of the IAEA or the OECD/NEA, taking into account the recommendations of the INLEX in response to the IAEA Action Plan on Nuclear Safety;

33. Recognizes the valuable work of INLEX, and takes note of its recommendations and best practices on establishing a global nuclear liability regime, including through the identification of actions to address gaps in and enhance the existing nuclear liability regimes, encourages the continuation of INLEX, especially for its support for the IAEA's outreach activities to facilitate the achievement of a global nuclear liability regime, and requests that INLEX, via the Secretariat informs Member States on a regular and transparent basis about the work of INLEX and its recommendations to the Director General;

3. IAEA Safety Standards

34. Encourages Member States to implement measures nationally, regionally and internationally to ensure and continuously enhance, as necessary, nuclear, radiation, transport and waste safety, as well as emergency preparedness and response, taking into account IAEA Safety Standards;
35. Encourages Member States to use the IAEA Safety Standards in their national regulatory programmes, as appropriate, and to periodically review national legislation, regulations and guidance taking into account the latest revision of the IAEA Safety Standards and report on progress in appropriate international fora;
36. Urges all Member States to be mindful of the importance of nuclear safety and security regarding peaceful nuclear facilities and materials in all circumstances, and, without prejudice to the views of Member States, notes the IAEA Director General's "seven indispensable pillars for ensuring nuclear safety and security during an armed conflict, which derive from the IAEA safety standards and nuclear security guidance", advanced on 2 March 2022;
37. Requests the Agency to continue to support the work of the Commission on Safety Standards (CSS) and the Safety Standards Committees;
38. Encourages the Secretariat to continue to address any delays in the publication process, in particular in the editing of drafts, and improve the coherence of the translation of Safety Standards into all IAEA official languages, and welcomes the development and implementation of an action plan aimed at clearing the backlog of awaiting publications and at finding a sustainable solution, so that the Safety Standards endorsed by the CSS are published in a timely manner;
39. Requests further efforts of the Secretariat to enable representatives of all Member States, including those considering introducing nuclear power or radiation technology, to participate in the work of the CSS and Committees;
40. Requests the Agency to continuously review and strengthen, as broadly and effectively as possible the IAEA Safety Standards, and to strengthen education and training programmes aimed at increasing awareness of the IAEA Safety Standards as well as to address the lessons learned from the COVID-19 pandemic in the relevant IAEA Safety Standards, as appropriate;
41. Encourages the Agency to keep up to date with the latest relevant findings of research supporting nuclear safety expertise as well as scientific and technological innovations, to enhance technical capabilities accordingly and to strengthen IAEA Safety Standards as appropriate;
42. Requests the Secretariat to continue its close cooperation, where appropriate, with the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), the International Commission on Radiological Protection (ICRP) and other relevant organizations in the development of IAEA Safety Standards;
43. Encourages the Secretariat to continue assessing the applicability of Safety Standards to Small Modular Reactors (SMRs), most notably through the CSS as well as affiliated and relevant committees, and to keep abreast of any new developments and challenges in this regard;

4. Self-assessments and the Agency's Peer Review and Advisory Services

44. Encourages Member States to carry out regular self-assessments of their domestic nuclear, radiation, transport and waste safety, as well as their emergency preparedness and response measures,

taking into account the Agency's self-assessment tools and, on a voluntary basis, and for transparency, to make the outcomes publicly available;

45. Further encourages Member States, including those considering introducing nuclear power or radiation technology, on a voluntary basis, to regularly use advisory services, to host Agency peer review and associated follow-up missions, at appropriate phases, to make findings and outcomes publicly available and to implement recommended actions in a timely manner;

46. Encourages Member States in a position to do so to continue making the necessary expertise available to the Secretariat for IAEA safety peer reviews and advisory services and further encourages the Secretariat to make available training courses for future reviewers;

47. Requests that the Secretariat continues to provide for and promote the regular interaction of the Peer Review and Advisory Services Committee with Member States and, in close consultation and coordination with Member States, continues to assess and strengthen the overall structure, effectiveness and efficiency of services within the purview of the Committee, and to report to the Board of Governors on the outcomes of this common effort;

48. Requests the Secretariat to continue improving the effectiveness and efficiency of Integrated Regulatory Review Service (IRRS) and Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) peer review missions, including the combined or back-to-back IRRS-ARTEMIS missions which take place when requested by a Member State, using lessons learned from relevant past experiences, in close cooperation with Member States;

49. Requests the Secretariat to continue efforts in support of long-term safe operation of nuclear installations, and encourages Member States to make use of IAEA safety peer review services such as Safety Aspects of Long Term Operation (SALTO) or Operational Safety Review Team (OSART) on long-term safe operation of nuclear power plants and research reactors and to make use of the IAEA peer review service on safety during operation of nuclear fuel cycle facilities;

50. Encourages Member States operating research reactors to request, as appropriate, IAEA peer review missions, including Integrated Safety Assessment of Research Reactor (INSARR) and Operation and Maintenance Assessment for Research Reactors (OMARR) review missions;

51. Requests the Secretariat to continue to cooperate with Member States and the World Health Organization (WHO) to ensure that the IAEA's Emergency Preparedness Review (EPREV) service coordinates with the WHO's Joint External Evaluations for the International Health Regulations in the area of radiation emergencies;

5. Nuclear Installation Safety

52. Encourages all Member States to contribute to the realization of CNS objectives, including those contained in the Vienna Declaration on Nuclear Safety on Principles for the Implementation of the Objective of the CNS to Prevent Accidents and Mitigate Radiological Consequences, inter alia through the implementation of the relevant provisions of this Resolution and calls upon all Contracting Parties to the CNS to address the Challenges and Suggestions from their review process in a timely manner;

53. Renews the request to the Secretariat, in consultation with all Member States, using the safety issues highlighted in the summary report of the 7th Review Meeting of the Contracting Parties of the CNS, to identify issues of particular relevance for civilian nuclear reactors not covered by the scope of the CNS;

54. Calls upon all Member States with nuclear installations that have not yet done so to establish and maintain effective operational experience feedback programmes including identifying safety-related precursors, and to share freely their experience, assessments and lessons learned, including through the submission of incident reports, including via the Agency's web-based reporting systems related to operational experience;
55. Notes the launch of the IAEA's NHSI, which aims to harmonize regulatory activities and standardize industrial approaches to support the safety and security of SMRs and advanced nuclear reactors, and encourages Member States to participate in this initiative;
56. Encourages Member States embarking on nuclear programmes to consider requesting assistance in site safety review and capacity building of both regulator and operator organizations in relation to site selection and site safety assessment;
57. Requests the Secretariat to consider the safety and regulatory aspects of fusion facilities, and continue to organize meetings and activities on fusion reactor safety with a view to using the findings to consider the various safety aspects of such facilities in the future development or revision of safety standards for fusion facilities;
58. Encourages Member States to address ageing management, including physical ageing and obsolescence, throughout the lifetime of nuclear installations, and to share lessons learned from available international experience, as appropriate, and further requests the Secretariat to support Member States in this regard;
59. Renews its calls upon Member States to ensure that comprehensive and systematic safety assessments are carried out periodically and regularly for existing installations throughout their lifetime in order to identify safety improvements that are oriented to meet the objective of preventing accidents with radiological consequences and mitigating such consequences should they occur, and that reasonably practicable or achievable safety improvements are implemented in a timely manner and requests the Secretariat to continue to facilitate information exchange on experiences and lessons learned in this regard;
60. Encourages Member States that have not already done so to perform safety assessments, including at multi-unit sites, to evaluate the robustness of nuclear power plants and other installations against one or more plausible extreme events, with due account taken for the effects of climate change, and encourages the Secretariat to continue supporting Member States in this regard by considering updating technical guidance for site and design evaluation to protect nuclear installations against external hazards, in consultation with Member States;
61. Encourages the Agency to continue, as appropriate, activities relating to the safety of multi-unit sites, in a manner which facilitates Member States' development and application of new technologies;
62. Further encourages Member States to exchange regulatory information and share experiences with regard to new nuclear power plants and advanced reactors, including small and medium, or modular reactors (SMRs) and Generation IV reactors, taking into account that new nuclear power plants are to be designed, sited, and constructed consistent with the objective of preventing accidents in the commissioning and operation and, should an accident occur, mitigating possible releases of radionuclides causing long-term off-site contamination and avoiding both early radioactive releases and radioactive releases large enough to require long-term protective measures and actions and encourages Member States to ensure that new reactor technologies take into account lessons from the Fukushima Daiichi nuclear power plant accident;
63. Requests the Secretariat to continue identifying issues important to safety of operational and new nuclear power plants and also advanced reactors, including through the organization of meetings and

conferences such as the International Conference on Topical Issues in Nuclear Installation Safety to be held in October 2022;

64. Encourages the Secretariat to provide for the exchange of information and experience of conducting the safety assessment of digital instrumentation and control systems;
65. Encourages the Agency to facilitate the exchange of results of research and development on severe accident management strategies for nuclear power plants;
66. Encourages Member States to share information on research programmes needed to ensure availability and durability of scientific expertise to support nuclear safety;
67. Encourages Member States to develop as necessary and implement severe accident management guidelines taking into account, inter alia, lessons learned from the Fukushima Daiichi nuclear power plant accident, and requests the Secretariat to support their efforts through training workshops;
68. Requests the Secretariat, in close cooperation with Member States, to continue to support the IAEA Fuel Incident Notification and Analysis System (FINAS), the International Reporting System for Operating Experience (IRS) and the Incident Reporting System for Research Reactors (IRSRR), and invites Member States to benefit from participation in these systems;
69. Calls upon the Secretariat to continue considering the safety and security aspects, including emergency preparedness and response, of TNPPs and SMRs throughout their life cycle, including through the Small Modular Reactor Regulators' Forum, the NHSI and its regulatory track and, where relevant, the NHSI industry track and the International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO), and to draw upon the knowledge and experience of other international organizations, and renews its request to the Secretariat to continue to organize meetings and activities on TNPPs and SMRs, with a view to using their findings to consider, under the common existing requirements and legal instruments, the various safety aspects of such power plants, including their transport, as well as identifying, understanding and addressing regulatory challenges related to their lifecycles;

6.

Radiation Safety and Environmental Protection

70. Encourages Member States to align their national radiation protection programmes to the revised International Basic Safety Standards (GSR Part 3), and requests the Secretariat to support its effective implementation, in relation to occupational, public and medical exposure under planned exposure situations, emergency exposure situations and existing exposure situations, as well as protection of the environment, and further requests the Secretariat to continue to organize national workshops on implementing GSR Part 3, upon request;
71. Invites Member States operating nuclear power plants and those considering introducing nuclear power, to encourage their utilities and authorities to become members of the IAEA-OECD/NEA Information System on Occupational Exposure (ISOE) programme, and requests the Secretariat to assist in this regard and to continue supporting the ISOE programme;
72. Requests the Secretariat to promote and to assist Member States, upon request, in using the Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR) programme to strengthen the safety of workers who risk exposure to ionizing radiation in the fields of medicine and industry and recommends that Member States provide data on occupational exposure to the ISEMIR programme;
73. Requests the Secretariat to make recommendations and assist Member States, upon request, to enhance radiation protection of workers by utilizing efficient and effective dosimetry techniques and

recalls the holding of the 2022 IAEA International Conference on Occupational Radiation Protection in Geneva, Switzerland, in cooperation with the International Labour Organization (ILO);

74. Requests the Secretariat to assist Member States, upon request, to strengthen their capabilities for the realistic assessment of radiological impacts of material containing enhanced levels of naturally occurring radioactive materials (NORM);

75. Calls upon Member States receiving assistance from the Agency to update periodically information in the IAEA Radiation Safety Information Management System (RASIMS) so as to enable them and the Secretariat to identify the technical assistance needed to help strengthen their national radiation safety infrastructure for existing and planned use of radiation sources;

76. Requests the Agency, in cooperation with the WHO and in coordination with other international organizations, to strengthen the radiation protection of patients and health professionals and to enhance the safety of radiological procedures;

77. Requests the Secretariat to promote regional technical cooperation projects on medical exposure and encourages Member States to use safety reporting and learning systems developed by the Agency for radiological procedures and radiotherapy;

78. Requests the Secretariat, upon request by Member States, to continue to assist with the implementation of radiation protection guidance for the regulatory control of the use of human imaging techniques for non-medical purposes;

79. Encourages Member States to assess the extent of public exposure to radon in homes, schools and other buildings, and where relevant, to take appropriate actions to reduce exposure taking into account the IAEA Safety Standards, and requests the Secretariat, in cooperation with Member States, the WHO and other relevant international organizations, to assist Member States in this regard;

80. Urges the Secretariat, following recent work of the Codex Committee on Contaminants in Foods, to prepare a summary paper on radionuclides in feed and food, including drinking water, and, in collaboration with the FAO and WHO and interested Member States, to promote discussion of and potential application of the recently released document on ‘Exposure Due to Radionuclides in Food Other Than During a Nuclear or Radiological Emergency’;

81. Requests the Secretariat to continue its work in order to develop a technical document addressing the trade of commodities, in support of the revised guidance on the concept of exemption, in consultation with Member States and relevant international organizations;

82. Requests the Secretariat to develop a safety report on radionuclides in all consumer goods to address the presence of radionuclides in different consumer goods in non-emergency situations, in consultation with Member States and relevant international organizations;

83. Requests the Secretariat to continue updating the “Inventory of Radioactive Materials Resulting from Historical Dumping, Accidents and Losses at Sea (for the Purposes of the London Convention 1972 and Protocol 1996)” as appropriate;

7.

Transport Safety

84. Urges Member States that do not have a national regulatory framework governing the safe transport of radioactive material to adopt and implement such a framework expeditiously and calls upon all Member States to ensure that such a regulatory framework is in conformity with the applicable edition of the IAEA’s Regulations for the Safe Transport of Radioactive Material (SSR-6);

85. Stresses the importance of having effective liability mechanisms to ensure prompt compensation for damage incurred during the transport of radioactive material, including maritime transport, and in this context notes the application of the principles of nuclear liability, including strict liability;

86. Encourages efforts to avoid and address problems related to denials of and delays in the shipment of radioactive material, particularly shipment by air and calls upon Member States to facilitate the transport of radioactive material, and to identify, if they have not done so, a national focal point on denials of shipment of radioactive materials to achieve a satisfactory and timely resolution of this issue;

87. Welcomes the Agency's efforts to establish a Working Group, with full participation of interested Member States and relevant experts, to consider the options for addressing denials of and delays in shipment, including a code of conduct on facilitation;

88. Encourages the Agency to continue to strengthen and widen efforts to make available relevant education and training on the safety of radioactive material during transport, and acknowledges the progress made in that regard, including the preparation and translation of training materials into IAEA official languages;

89. Welcomes the practice of some shipping States and operators of providing timely information and responses to relevant coastal States in advance of shipments in order to address concerns regarding nuclear safety and security, including emergency preparedness, and notes that the information and responses provided should in no case be contradictory to measures of nuclear security and safety of the shipment or of the shipping State;

90. Calls upon Member States to further enhance mutual confidence, such as through the use of guidelines, voluntary communication practices and tabletop exercises, and relevant outcomes thereof, and requests the Secretariat to provide appropriate support to interested Member States upon their request;

91. Encourages the continuation of the positive dialogue process between coastal and shipping States, which has improved mutual understanding, confidence building and enhanced communication in relation to the safe maritime transport of radioactive material, and takes note that other interested Member States are invited to join in this informal dialogue process and to implement, as appropriate, the best practices as contained in document INFCIRC/863, subject to confidentiality and security constraints;

8.

The Safety of Spent Fuel and Radioactive Waste Management

92. Encourages Member States to plan, develop and implement national long-term programmes or approaches for the safe management of radioactive waste and spent fuel, containing outcomes which are achievable and timely to avoid undue burdens on future generations, and put mechanisms in place to ensure adequate resources are available, and to share experience and lessons learned in this regard;

93. Takes note of the outcomes of the 7th Review Meeting of the Contracting Parties to the Joint Convention, including the actions taken to promote adherence and active participation in the Joint Convention, the overarching issues and good practices and areas of good performance identified by the President and the country groups and challenges and suggestions identified for Contracting Parties, and notes the importance of the topical discussion during the 7th Review Meeting on stakeholder engagement relating to management of radioactive waste from decommissioning and legacy sites;

94. Encourages the Agency to continue its activities relating to the safety of predisposal management, near-surface, bore-hole and geological disposal of radioactive waste and, where appropriate, spent

nuclear fuel, and further encourages the early engagement of regulatory bodies before the licensing process is launched;

95. Requests the Secretariat to foster information exchange on safety-related aspects of storage of spent nuclear fuel and radioactive waste, emphasizing that safe disposal is the long-term solution for radioactive waste and spent fuel, if considered as waste;

96. Encourages Member States to consider possibilities for co-operation in radioactive waste management implementation during disposal;

97. Encourages Member States to plan for the management of all kinds of wastes arising from a nuclear or radiological emergency, including damaged nuclear fuel, where routine strategies are impractical or less than optimal, and where the potential exists for large volumes of radioactive waste resulting from the emergency and/or environmental remediation;

9.

Safety in Decommissioning, Uranium Mining and Processing, and Environmental Remediation

98. Encourages Member States to plan for the safe decommissioning of facilities, including disposal, during the facility design phase, and update as appropriate, and to put mechanisms in place to ensure human and financial resources are available so that decommissioning can start as soon as justified at a national level;

99. Encourages Member States to consider developing and adopting strategies for the end state of decommissioning and disposal;

100. Encourages Member States to benefit from the exchange of lessons learned and good practices from decommissioning and remediation activities, and to take them into account in their own activities, as appropriate;

101. Requests the Secretariat to continue supporting the exchange of information on safety-related aspects of decommissioning;

102. Requests the Secretariat to assist Member States, upon request, in developing plans for the safe decommissioning and remediation of facilities involving NORM residues;

103. Requests the Secretariat to continue supporting efforts relating to technical coordination for multilateral initiatives to remediate legacy uranium production sites, notably in Central Asia, through the Coordination Group for Uranium Legacy Sites, and encourages the Secretariat to consult relevant Member States in Africa, upon request, with a view to implementing similar initiatives; and encourages Member States, in a position to do so, to provide support to this end;

104. Requests the Agency to continue implementing activities through the International Working Forum on Regulatory Supervision of Legacy Sites;

10.

Capacity-building

105. Encourages Member States to develop national strategies for capacity-building in nuclear safety including through education and training, promoting gender equality and workforce diversity, human resource development, knowledge management and knowledge networks and requests the Secretariat to provide support, upon request, and further encourages Member States to ensure that resources are made

available for capacity building of this kind, including through the IAEA Marie Skłodowska-Curie Fellowship Programme;

106. Requests the Secretariat to strengthen and expand its programme of education and training activities, focusing on building institutional, technical, managerial and leadership capabilities in Member States;

107. Requests the Secretariat to support Member States' efforts to identify and implement knowledge management measures, and to continue efforts to acquire, update and preserve knowledge and institutional memory relating to nuclear safety, to mitigate lost experience, and welcomes in this regard the IAEA service for Knowledge Management Assist Visits (KMAV);

108. Requests the Secretariat to support and coordinate regional and inter-regional efforts for the sharing of knowledge, expertise and experience on safety-relevant issues and encourages Member States to participate in knowledge-sharing platforms such as the Global Nuclear Safety and Security Network (GNSSN) for efficient information sharing and effective cooperation;

109. Encourages Member States to utilize, as appropriate, the IAEA Systematic Approach to Training (SAT) and other relevant tools for the self-assessment of capacity building programmes at national and organizational level, and further encourages the Secretariat to continue developing the SAT;

110. Requests the Secretariat support the knowledge management activities of Member States, upon request, and in particular the sustainability of competence and skills in their regulatory bodies;

111. Requests the Secretariat to consolidate the international experience of recovery from accidents and review their impact so that Member States can make better decisions on emergency planning and recovery;

11.

Safe Management of Radioactive Sources

112. Calls upon all Member States to ensure that their legislative or regulatory framework includes specific provisions for the safe management of radioactive sources through all stages of the life cycle;

113. Calls upon all Member States to ensure that there is adequate provision, including financial arrangements, as appropriate, for safe and secure storage and disposition pathways for disused sources so that such sources within their territories remain under regulatory control, and encourages all Member States to develop arrangements, as practicable, to permit the return of disused sources to the supplier States or consider other options including the reuse or recycling or disposal of sources wherever possible;

114. Encourages the Secretariat and Member States to strengthen national and multinational efforts to recover orphan sources and maintain control of disused sources, and invites Member States to establish radiation detection systems, including at international borders, as appropriate;

115. Calls upon all Member States to establish and maintain national registers of high-activity sealed radioactive sources;

116. Encourages Member States to make use of the Agency's services when dealing with issues related to the control or regaining of control over orphan sources and encourages the Secretariat to advise Member States on how to formulate such assistance requests;

117. Requests the Secretariat to continue to foster information exchange on implementation of the Code of Conduct on the Safety and Security of Radioactive Sources and its Guidance on the Import and Export of Radioactive Sources and its Guidance on the Management of Disused Radioactive Sources;

118. Requests the Secretariat to further facilitate, as appropriate, information exchange between interested Member States on radiation safety aspects of the management of movement of scrap metal or materials produced from scrap metal that may inadvertently contain radioactive material;

119. Encourages the Agency to support research efforts on the safety of nuclear and radiation technologies, including on options for safe, economically viable and technically feasible technologies, respecting each Member State's choice in nuclear technology;

12.

Nuclear and Radiological Incident and Emergency Preparedness and Response

120. Encourages Member States to develop and strengthen national, bilateral, regional and international emergency preparedness and response mechanisms and arrangements, including protective measures; to cooperate closely on precautionary measures to minimize long-term consequences, as appropriate; to facilitate timely information exchange during a nuclear or radiological emergency and enhance transparency among licensees, authorities, the public and the international community; and to continue to improve bilateral, regional and international cooperation among national experts, competent authorities and regulators to that effect, including through the organization of joint training exercises, as appropriate;

121. Requests the Secretariat, in close cooperation and upon consultation with Member States and appropriate relevant international organizations, to continue to prioritize a programme of exercises emphasizing the importance of large-scale exercises, such as ConvEx-3;

122. Encourages Member States to ensure that radiation protection strategies are developed, justified and optimized to enable effective protective actions and other response actions within their State as outlined in GSR Part 7; to be taken in a timely manner, during a nuclear or radiological emergency; and requests the Secretariat to provide assistance to Member States in this regard, upon request;

123. Encourages Member States to make arrangements to ensure that protective actions in a nuclear emergency are effective and well balanced by taking into account all potential hazards, including mental health and psycho-social impacts arising from such actions;

124. Requests the Secretariat to work with Member States to maintain and raise awareness of the Agency's arrangements for assessment, prognosis and communication, including arrangements for the timely sharing of relevant technical parameters, while making effective use of Member States' capabilities and, if necessary, to refine the role of the Incident and Emergency Centre (IEC), during an emergency;

125. Requests the Secretariat to support Member States, upon request, to develop, strengthen and build the capacity of national emergency preparedness and response mechanisms and arrangements;

126. Encourages Member States to establish and maintain effective communication channels between the responsible national authorities at all times, to ensure respective responsibilities are clear and to improve coordination and decision-making process for all types of accident scenarios, including "a natural event, a human error, a mechanical or other failure, or a nuclear security event" as outlined in GSR Part 7;

127. Encourages Member States and the Secretariat to continue utilizing the IAEA Unified System for Information Exchange (USIE) as a web portal for Contact Points of States Parties to the Early Notification Convention and the Assistance Convention, and of IAEA Member States to exchange urgent information during nuclear and radiological incidents and emergencies, and for officially nominated International Nuclear and Radiological Event Scale (INES) national officers to post information on events rated using INES, further encourages Member States to exchange information on

nuclear and radiological incidents and emergencies, which includes national and transnational emergencies as defined in GSR Part 7 as being of actual or potential or perceived radiological significance for more than one State, and encourages Member States to consider sharing this information with the general public, as appropriate, including through the USIE mechanism;

128. Requests the Secretariat to work with Member States to improve the IAEA Response and Assistance Network (RANET) to ensure that, if and when requested, timely and effective assistance can be provided, further requests the Secretariat to work with Member States to facilitate, as appropriate, bilateral and multilateral arrangements, and to enhance efforts to establish technical compatibility for international assistance, and encourages Member States to register and update, on a regular basis in RANET, national capabilities that could be made available to States requesting international assistance;

129. Recalls the 11th Meeting of the Representatives of Competent Authorities identified under the Early Notification Convention and the Assistance Convention, and requests the Secretariat, in consultation with Member States, to continue to facilitate information exchange between interested Member States and Competent Authorities;

130. Requests the Secretariat, in close cooperation with Member States, to continue to develop an effective public communication strategy and to maintain and further develop arrangements to provide Member States, international organizations and the general public with timely, clear, factually correct, objective and easily understandable information during a nuclear or radiological emergency;

131. Encourages the Secretariat to continue utilizing the International Radiation Monitoring Information System (IRMIS), requests the Secretariat to work with national contact points towards a public version of the system in a timely manner, and further encourages Member States in a position to do so, to routinely provide data to the system;

132. Encourages Member States to consider providing information to the Emergency Preparedness and Response Information Management System (EPRIMS) and encourages the Secretariat to promote the benefits of EPRIMS to Member States;

133. Requests the Secretariat, in close consultation with Member States, to review the Agency's arrangements for reporting nuclear and radiological incidents, accidents and emergencies, with a view to identifying potential improvements in these arrangements, and calls on all Member States, in a position to do so, to contribute to the effectiveness of these arrangements;

134. Requests the Secretariat, in coordination and consultation with Member States, to continue to strengthen cooperation with other relevant international organizations in the area of emergency preparedness and response, including through the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE);

13.

Implementation and Reporting

135. Requests the Secretariat to implement the actions called for in this resolution in a prioritized, efficient manner within available resources; and

136. Requests the Director General to report in detail at the sixty-seventh (2023) regular session of the General Conference on implementation of this resolution, and on other relevant developments in the intervening period.

General Conference

GC(66)/RES/7

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 14 of the agenda

(GC(66)/17)

Nuclear Security

Resolution adopted on 30 September 2022 during the eleventh plenary meeting

The General Conference,¹

- (a) Recalling its previous resolutions on measures to improve the security of nuclear and other radioactive material and on measures against the illicit trafficking of these materials,
- (b) Taking note of the Nuclear Security Report 2022 submitted by the Director General in document GC(66)/8, as well as of the Nuclear Security Review 2022 taken note of by the Board of Governors in document GC(66)/INF/5, and of the Nuclear Security Plan 2022–2025 approved by the Board of Governors in document GC(65)/24,
- (c) Reaffirming the common goals of nuclear non-proliferation, nuclear disarmament and peaceful uses of atomic energy, recognizing that nuclear security contributes to international peace and security, and stressing that progress in nuclear disarmament is critically needed and will continue to be addressed in all relevant fora, consistent with the relevant obligations and commitments of Member States,
- (d) Recognizing that the terms and concepts addressed in this resolution are based on the Nuclear Security Series (NSS) documents agreed by consensus,
- (e) Asserting that the responsibility for nuclear security within a State rests entirely with that State, and mindful of the sovereign rights and the responsibilities of every Member State, in accordance with its respective national and international obligations, to maintain at all times effective and comprehensive nuclear security of all nuclear and other radioactive material,
- (f) Recognizing that physical protection is a central element of nuclear security,
- (g) Taking note that physical protection is linked or, in many cases, interconnected with, but not limited to, other areas of nuclear security, such as nuclear material accounting and control,

¹ The resolution was adopted with 62 in favour, 0 against and 29 abstentions (show of hands).

information security and computer security, nuclear security culture, and nuclear security measures for material out of regulatory control, while acknowledging the important functions of prevention, detection, and response,

(h) Remaining concerned about existing, evolving and emerging nuclear security risks, challenges and threats and committed to addressing these without prejudice to the sovereign rights of Member States, and reaffirming that the responsibility for nuclear security within a State rests entirely with that State,

(i) Recognizing that addressing challenges associated with computer technology, as well as other new technologies, play an increasing and vital role in ensuring the security of nuclear and other radioactive material and associated facilities,

(j) Acknowledging that advances in science, technology and engineering present opportunities to enhance nuclear security, and stressing the need to address existing, evolving and emerging challenges and threats to nuclear security, including related to technological developments, while reaffirming that the responsibility for nuclear security within a State rests entirely with that State,

(k) Recalling with appreciation the International Conferences on Nuclear Security (ICONS) in 2013, 2016 and 2020, and their related Ministerial Declarations, and taking note of valuable technical expert discussions reflected in the Presidents' Reports,

(l) Recognizing the importance of maintaining and strengthening the dialogue between relevant government bodies and the nuclear industry at national level on nuclear security,

(m) Underlining the enduring need to raise awareness of nuclear security among all stakeholders, which include users of nuclear and other radioactive material and competent authorities in Member States and among the relevant staff of the Secretariat,

(n) Acknowledging that nuclear security may contribute to the positive perception, at a national level, of peaceful nuclear activities,

(o) Recognizing the central role of the Agency, as reaffirmed by IAEA Member States for instance at the 16th Summit of the Non-Aligned Movement (NAM) in 2012, in developing comprehensive nuclear security guidance documents and, on request, providing assistance to Member States in order to facilitate their implementation,

(p) Emphasizing the need for the involvement of all Member States of the Agency in nuclear security-related activities and initiatives in an inclusive manner, and noting the role that international processes and initiatives, including the Nuclear Security Summits, have played in the area of nuclear security,

(q) Reaffirming the central role of the Agency in facilitating international cooperation in supporting the efforts of States to fulfil their responsibilities to ensure the security of civilian nuclear and other radioactive material,

(r) Reaffirming the importance of the Convention on the Physical Protection of Nuclear Material (CPPNM) and its 2005 Amendment extending its scope, recognizing the importance of acceptance, approval or ratification by further IAEA Member States, and noting the importance of their full implementation and universalization,

(s) Recalling the Director General's role as depositary of the CPPNM and its 2005 Amendment (A/CPPNM) and the Agency's role in promoting universalization of relevant legal instruments and assisting Member States, upon request, in adherence to, and implementation of, relevant international legal instruments,

- (t) Recognizing that highly enriched uranium (HEU) and separated plutonium in all their applications require special precautions to ensure their nuclear security and that it is of great importance that they be appropriately secured and accounted for, by and in the relevant State,
- (u) Recognizing the importance of minimizing the use of highly enriched uranium (HEU) and using low enriched uranium (LEU) where technically and economically feasible,
- (v) Noting United Nations Security Council resolutions 1373, 1540, 1673, 1810, 1977 and 2325, United Nations General Assembly resolution 71/38, the International Convention for the Suppression of Acts of Nuclear Terrorism, and international efforts in conformity with these instruments to prevent access by non-State actors to weapons of mass destruction and related material,
- (w) Noting the conclusions and recommendations for follow-on actions of the 2010 Review Conference of the parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) relating to nuclear security,
- (x) Recognizing the need to strengthen and improve cooperation in, and the coordination of, international efforts in the field of nuclear security in order to avoid duplication and overlap, and acknowledging the central role of the Agency in this respect,
- (y) Emphasizing the need for Member States to continue providing appropriate technical, human and financial resources, including through the Nuclear Security Fund, for the Agency to implement its nuclear security activities and to enable the Agency to provide, upon request, the support needed by Member States,
- (z) Recognizing that nuclear security and safety measures have the common aim of protecting human health, society and the environment, while acknowledging the distinctions between the two areas, and affirming the importance of coordination in this regard, and underlining the importance that, at the national level, both these areas are dealt with appropriately, by governments and their competent authorities according to their respective competencies,
- (aa) Noting General Conference resolutions GC(XXIX)/RES/444 and GC(XXXIV)/RES/533 regarding attacks or threats of attack against nuclear facilities devoted to peaceful purposes, and also noting the 2009 General Conference unanimous decision GC(53)/DEC/13, which recognized the importance attached to safety, security and physical protection of nuclear material and nuclear facilities,
- (bb) Emphasizing the importance of the IAEA Director General's "seven indispensable pillars for ensuring nuclear safety and security during an armed conflict, which derive from the IAEA safety standards and nuclear security guidance", advanced by the IAEA Director General on 2 March 2022,
- (cc) Noting the recommended requirements for measures to protect against sabotage of nuclear facilities and unauthorized removal of nuclear material in use, storage and transport included in IAEA Nuclear Security Series No. 13 (INFCIRC/225/Rev.5), using inter alia a graded approach, as well as the ongoing work by the Agency on further guidance on their implementation, including during the process of design, construction, commissioning, operation, maintenance and decommissioning of nuclear facilities,
- (dd) Considering that Nuclear Security Fundamentals and Recommendations developed in the Nuclear Security Series apply to small modular reactors (SMRs),
- (ee) Recalling the objectives of the Code of Conduct on the Safety and Security of Radioactive Sources and its Guidance on the Import and Export of Radioactive Sources and its Guidance on the Management of Disused Radioactive Sources,

- (ff) Acknowledging the 2022 International Conference on the Safety and Security of Radioactive Sources, to which technical expert discussions made a valuable contribution,
- (gg) Noting the importance of security in the transport of nuclear and other radioactive material and stressing the need to take effective measures to protect nuclear and other radioactive material during transport against insider threats or unauthorized removal or sabotage,
- (hh) Reaffirming and respecting each Member State's choices in nuclear technology, and encouraging the Agency to promote and facilitate technical exchanges of experience, knowledge and good practices on the use and security of high activity radioactive sources during their full life cycle, and inform Member States, within its mandate, of nuclear and radiation technology options which are technically feasible, economically viable and sustainable,
- (ii) Noting the contribution of Member States' systems of accounting for and control of nuclear material to preventing loss of control and illicit trafficking and to deterring and detecting the unauthorized removal of nuclear material,
- (jj) Underlining the importance of Agency programmes for education and training in nuclear security, as well as other international, regional and national efforts to this end,
- (kk) Recognizing the importance of considering nuclear security when organizing major public events, and commending the work done by the Agency in providing, upon request, technical assistance and expert support to countries hosting major public events,
- (ll) Stressing the essential importance of ensuring the confidentiality of information relevant to nuclear security,
- (mm) Noting the adoption of the Board of Governors resolutions GOV/2022/17 of 3 March 2022 and GOV/2022/58 of 15 September 2022 entitled "The safety, security and safeguards implications of the situation in Ukraine",
- (nn) Emphasizing the increasing risk on the physical integrity of Ukrainian nuclear facilities and their nuclear and radioactive material due to armed attacks, and noting with grave concern the current situation, in particular at the Zaporizhzhia Nuclear Power Plant, including the significant loss of control by the competent authorities and the operator, and the negative consequences on nuclear security, including physical protection, and recalling the need to immediately cease all actions against and at nuclear facilities devoted to peaceful purposes, and
- (oo) Realizing that States have developed their national nuclear security regimes to ensure physical protection of nuclear material and against nuclear terrorism and illicit trafficking of nuclear and other radioactive material,
1. Affirms the central role of the Agency in strengthening the nuclear security framework globally and in coordinating international activities in the field of nuclear security, while avoiding duplication and overlap;
 2. Calls upon all Member States, within their responsibility, to achieve and maintain highly effective nuclear security, including physical protection, of all nuclear and other radioactive material during use, storage and transport and of the associated facilities at all stages in their life cycle, as well as protecting sensitive information;
 3. Calls upon all Member States, within their responsibility, to ensure computer security, also taking into account personnel reliability including insider threats;

4. Calls upon the Secretariat to implement the Nuclear Security Plan 2022–2025 (GC(65)/24) in a comprehensive and coordinated manner based on the priorities and needs expressed by Member States and further calls on the Secretariat to conduct an assessment of the development process and the scope of the Nuclear Security Plan, and draw lessons with a view to exploring a future process, under the leadership of Member States;
5. Encourages the Agency to enhance its technical capabilities and keep abreast of scientific, technological and engineering innovations with a view to developing guidance and facilitating training that will support Member States, upon their request, in implementing measures that will effectively confront current and evolving challenges, risks and threats to nuclear security;
6. Welcomes the fact that the IAEA Secretariat and Member States have taken into account resolution GC(64)/RES/10 and also have considered the ICONS 2020 Ministerial Declaration in the consultations process between the Secretariat and the Member States during the development of the IAEA’s Nuclear Security Plan 2022–2025;
7. Calls upon the Secretariat to continue to organize ICONS every four years, and encourages all Member States and the Secretariat to engage actively in the preparation of ICONS 2024;
8. Calls upon Member States that have not yet done so to establish or designate, and sustain a competent authority or authorities responsible for the implementation of the legislative and regulatory framework, which is or are functionally independent in its or their regulatory decision-making from any other bodies that deal with the promotion or utilization of nuclear or other radioactive material, and which has or have the legal authority and the human, financial and technical resources necessary for fulfilling its or their responsibilities;
9. Calls upon all States to ensure that measures to strengthen nuclear security do not hamper international cooperation in the field of peaceful nuclear activities, the production, transfer and use of nuclear and other radioactive material, the exchange of such material for peaceful purposes and the promotion of peaceful uses of nuclear energy, and do not undermine the established priorities of the Agency’s technical cooperation programme;
10. Recognizes the Agency’s Regulatory Infrastructure Development Project (RIDP) as an effective regional technical assistance mechanism that supports the establishment and enhancement of national regulatory infrastructures for security of radioactive material as well as for radiation safety in many countries and encourages efforts to implement RIDPs in additional regions and sub-regions in response to requests for assistance;
11. Calls upon all Member States to consider providing the necessary political, technical and financial support to the Agency’s efforts to enhance nuclear security through various arrangements at the bilateral, regional and international levels, and recalls the decision of the Board of Governors on support for the Nuclear Security Fund;
12. Encourages all Parties to the CPPNM and its 2005 Amendment to fully implement their obligations thereunder, encourages States that have not yet done so to become party to this Convention and its Amendment, further encourages the Agency to continue efforts to promote further adherence to the Amendment with the aim of its universalization, reminds all Parties to inform the depositary of their laws and regulations which give effect to the Convention without further delay, and requests the Director General of the IAEA, as the depositary, to continue communicating such information to all Parties;
13. Welcomes the successful holding of the 2022 Conference of the Parties to the Amendment to the CPPNM and notes that the required number of Parties to the Amendment requested the depositary to convene a follow-on Conference, in line with Article 16.2 of the Convention, and requests the Secretariat

to take the Outcome Document of the 2022 Conference into consideration in line with the Member States' respective legal obligations;

14. Notes the online repository of documents on the CPPNM, its 2005 Amendment, and relevant Review Conferences, and requests the Secretariat to continue to update it as appropriate;

15. Encourages States that have not yet done so to become parties to the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), also recognizing the ongoing efforts with regard to its universalization and effective implementation;

16. Encourages the Secretariat to continue to assist Member States, upon request, in their development of national legislative and regulatory frameworks and, in consultation with Member States, to consider ways of further promoting and facilitating the exchange, on a voluntary basis, of information on the implementation of the international legal instruments relevant to nuclear security;

17. Calls upon all Member States to fully implement their respective obligations under international legally binding instruments relevant to nuclear security;

18. Takes note that regional organizations of regulatory authorities can strengthen regional cooperation through the exchange of information, experience and technical expertise, and encourages the Secretariat to provide assistance to such fora, on request;

19. Requests the Secretariat to continue improving communication with the public and Member States about its nuclear security activities, such as advisory services, development of non-legally binding guidance, assistance and training, and how these activities assist Member States to improve nuclear security globally, and welcomes the efforts by Member States to contribute to raising the awareness of the Agency's nuclear security activities, with due respect to confidentiality;

20. Notes the first Nuclear Security Review 2022 which includes the Secretariat's analysis of some global trends, the Agency's activities in 2021 and its priorities for 2022, requests the Secretariat to assess, in collaboration with Member States, its value and complementarity with the Nuclear Security Report issued in response to the General Conference Resolution, while taking into account available resources, and recommends the Secretariat to coordinate this document with the Nuclear Security Report and the Nuclear Security Plan 2022-2025;

21. Recognizes and supports the key role of the Nuclear Security Guidance Committee (NSGC), including through coordination and priority-setting in the development and periodic review, when necessary and in a timely manner, of the Nuclear Security Series publications, encourages all Member States to actively participate in the NSGC and the review process of the Nuclear Security Series publications, and requests the continued assistance of the Secretariat to enable representatives of all Member States to participate in the work of the NSGC;

22. Encourages all Member States to take into account, as appropriate, the Nuclear Security Series publications, and to make use of them at their national discretion in their efforts to strengthen nuclear security;

23. Encourages the Secretariat to ensure that there are no future delays in the editing and publication process of Nuclear Security Series documents so that they may be made available in a timely manner and in all UN languages, and notes the efforts of the Secretariat and the Nuclear Security Guidance Committee (NSGC) to make nuclear security guidance more streamlined across the different elements of nuclear security;

24. Notes the progress made in the Nuclear Security Series (NSS) guidance development process, and notes the recent publications on different aspects of nuclear security, such as: enhancing nuclear

security culture in organizations associated with nuclear and other radioactive material (NSS 38-T), developing a nuclear security contingency plan for nuclear facilities (NSS 39-T), physical protection (NSS 40-T), exercises for responses to materials out of regulatory control (MORC) (NSS 41-T), computer security (NSS 42-G), and radioactive material in use and storage (NSS 43-T);

25. Requests the Secretariat, while recognizing the distinction between nuclear safety and nuclear security, to continue facilitating, in close cooperation with Member States, a coordination process to address their interfaces in a timely manner, encourages the Agency to develop safety and security publications, to ensure consistency and to foster culture accordingly, and notes the current discussion on the development of publications reflecting their interfaces;

26. Calls upon all Member States to be mindful of the importance of nuclear safety and security regarding peaceful nuclear facilities and materials in all circumstances, and emphasizes the importance of the IAEA Director General's "seven indispensable pillars for ensuring nuclear safety and nuclear security during an armed conflict, which derive from the IAEA safety standards and nuclear security guidance", advanced by the IAEA Director General on 2 March 2022;

27. Calls upon all Member States to take into account information security, considering the balance between security and transparency as provided for in IAEA Nuclear Security Series No. 23-G with a view to further strengthening and improving relevant mechanisms that handle information pertaining to nuclear or other radioactive material, associated facilities and activities, as well as material encountered out of regulatory control;

28. Welcomes the launch of the Agency-wide Platform on Small Modular Reactors (SMRs) and their Applications and encourages further work by the Secretariat to provide support to interested Member States, upon their request, in applying, from the design stage, the Nuclear Security Fundamentals and Recommendations for SMRs;

29. Encourages the Agency to continue, in coordination with Member States, to actively fulfil its central and coordinating role in nuclear security activities among international organizations and initiatives, taking into account their respective mandates and memberships, and to work jointly, as appropriate, with relevant international and regional organizations and institutions, welcomes regular IAEA Information Exchange Meetings and requests the Secretariat to keep Member States informed in this regard;

30. Encourages the Secretariat to promote international exchanges of experience, knowledge and good practices regarding ways to develop, foster and maintain a robust nuclear security culture compatible with States' nuclear security regimes, and encourages the Secretariat to organize an international workshop on sustaining a nuclear security culture;

31. Encourages the Secretariat, in consultation with Member States, to increase its assistance to States, upon request, to develop, foster, and maintain a robust nuclear security culture, including publishing guidance, providing training activities and offering related self-assessment support and training materials and tools;

32. Encourages the Secretariat, in cooperation with Member States, to continue its training and train-the-trainers programmes taking into account the IAEA Nuclear Security Series, and to adapt the courses as appropriate, within its mandate, to meet the evolving needs of Member States;

33. Encourages the Agency to continue to conduct e-learning and some technical events in hybrid or virtual formats when appropriate or when physical meetings may not be feasible – recognizing Member State preferences and their request for equal access to such events, to ensure resilience of the implementation of the Agency's Nuclear Security Programme;

34. Encourages ongoing initiatives of Member States, in cooperation with the Secretariat, to further enhance nuclear security culture, through the development of skills and knowledge of personnel, dialogue and cooperation with the nuclear industry as well as international and regional networks, as appropriate, including through centres of excellence, the International Network for Nuclear Security Training and Support Centres (NSSC Network) and the International Nuclear Security Education Network (INSEN), and requests the Secretariat to continue to report to the Board of Governors on its activities in this respect;

35. Welcomes the progress made in the initiative by the Secretariat and Member States to develop and establish the Nuclear Security Training and Demonstration Centre (NSTDC) at Seibersdorf to complement the activities of Member States' Nuclear Security Support Centres (NSSCs), where relevant and while avoiding duplication and overlap, encourages the Secretariat, in close consultations with Member States and through the Friends of the NSTDC, to consider all aspects, including planning for financial resources, related to the long-term sustainability and operation of the NSTDC, and calls on the Secretariat to re-apply all programme support costs (PSC) from extrabudgetary contributions related to the NSTDC to assist in these efforts while keeping Member States informed of progress made;

36. Recognizes and supports the Agency's continuing work to assist, upon request, States' efforts to establish effective and sustainable national nuclear security regimes, to fulfil their obligations under United Nations Security Council resolutions 1540 and 2325, provided that the requests are within the scope of the Agency's statutory responsibilities;

37. Recognizes and supports the Agency's continuing work to assist, upon request, States' efforts to ensure the security of their nuclear and other radioactive material, including assistance in the implementation of Agency Nuclear Security Fundamentals and Recommendations when radioactive material is supplied by the Agency, and notes the 2021 International Conference on the Safe and Secure Transport of Nuclear and Radioactive Materials and the 2022 International Conference on Safety and Security of Radioactive Sources;

38. Encourages States to make further use of assistance in the field of nuclear security, including, as appropriate, through the establishment of Integrated Nuclear Security Support Plans (INSSPs), and similarly encourages States in a position to do so to make available such assistance;

39. Encourages the Secretariat to assist Member States, upon request, in the development of implementation strategies of their INSSPs in close consultation with the concerned Member State;

40. Requests the Secretariat to further develop, in close consultation with Member States, a voluntary mechanism to match Member States' requests for assistance with other Member States' offers of assistance, and highlighting, in cooperation with the recipient State, the most urgent needs for assistance, with due regard to the confidentiality of information relevant to nuclear security and asks the Secretariat to keep Member States informed of progress made in this regard;

41. Calls upon the Agency to support continued dialogue on the security of radioactive sources and disused radioactive sources, including during their transport, and to promote research and development in this field;

42. Calls upon the Agency, within its mandate, to inform Member States of nuclear and radiation technology options which are technically feasible, economically viable and sustainable, while respecting Member States' choices in nuclear technologies;

43. Encourages all Member States to make political commitments to the non-legally-binding Code of Conduct on the Safety and Security of Radioactive Sources and its Guidance on the Import and Export of Radioactive Sources and its Guidance on the Management of Disused Radioactive Sources, and to implement these, as appropriate, in order to maintain effective safety and security of radioactive sources

throughout their life cycle, and requests the Secretariat to continue supporting Member States in this regard upon request;

44. Calls upon all Member States to ensure that there is adequate provision for safe and secure storage and disposition pathways for disused radioactive sealed sources so that such sources within their territories remain under regulatory control, and encourages all Member States to develop arrangements, as practicable, to permit the return of disused sources to the supplier States or consider other options including the reuse or recycling of sources whenever possible;

45. Calls upon all States to improve and sustain, based on national security threat assessments, their national capabilities to prevent, detect, deter and respond to illicit trafficking and other unauthorized activities and events involving nuclear and other radioactive material throughout their territories and to meet their relevant international obligations, and calls upon those States in a position to do so to work to enhance international partnerships and capacity building in this regard;

46. Encourages Member States to conduct national and regional exercises, where appropriate, to strengthen their capacities to prepare and respond to a nuclear security event involving nuclear or other radioactive material;

47. Notes the utility of the Incident and Trafficking Database (ITDB) as a voluntary mechanism for the international exchange of information on incidents and illicit trafficking of nuclear and other radioactive material, encourages the Agency to further facilitate, including through designated Points of Contact, the timely exchange of information including through secured electronic access to information contained in the ITDB, and further encourages all States to join and participate actively in the ITDB programme in support of their national efforts to prevent, detect and respond to nuclear and other radioactive materials that may have fallen out of regulatory control;

48. Calls upon States to continue efforts on their territory to recover and secure nuclear and other radioactive material that has fallen out of regulatory control;

49. Calls upon all Member States to continue to take appropriate steps, consistent with the national legislation and regulation, to prevent, detect, and protect against insider threats at nuclear facilities, and calls upon the Secretariat to advise Member States, upon request, on taking further preventive and protective measures against insider threats to enhance nuclear security, including through the Use of Nuclear Material Accounting and Control for Nuclear Security Purposes at Facilities (IAEA Nuclear Security Series No. 25-G);

50. Calls upon all Member States to continue to take appropriate steps, consistent with the national legislation and regulation, to prevent, detect, and protect against insider threats at facilities using radioactive sources, and during transport;

51. Notes the Agency's efforts to raise awareness of the threat of cyber-attacks, and their potential impact on nuclear security, encourages States to take effective security measures against such attacks, and encourages the Agency to continue its efforts to strengthen computer security, to improve international cooperation, to bring together experts and policy-makers to promote the exchange of information and experiences, to develop appropriate guidance and to assist Member States, upon request, in this area by providing training courses and hosting further expert meetings specific to the computer security of nuclear facilities, and takes note of the Agency's upcoming 2023 International Conference on Computer Security in the Nuclear World: Security for Safety;

52. Welcomes the Agency's work of promotion and support in the field of nuclear forensics, including through the development of guidance, further requests the Secretariat to assist interested Member States, upon their request, through the provision of education and training, and encourages Member States to make available experts, to share experiences, knowledge and good practices, in nuclear forensics with

due regard to the principle of protection of sensitive information, and, if they have not yet done so, to consider establishing, where practical, national nuclear material databases or national nuclear forensics libraries;

53. Encourages the Agency to continue to provide, upon request, technical assistance to Member States hosting major public events, and to share, on a voluntary basis, good practices and lessons learned after such events, as appropriate;

54. Requests the Secretariat to continue the implementation of and to report on the Coordinated Research Projects (CRPs) in the field of nuclear security and to provide further information in this respect;

55. Encourages the Member States concerned, on a voluntary basis, to further minimize highly enriched uranium (HEU) in civilian stocks and use low enriched uranium (LEU) where technically and economically feasible, and requests the Agency to continue to advise and assist Member States upon request in this regard;

56. Encourages Member States to voluntarily use, and make available experts to the Agency to carry out, the Agency's nuclear security advisory services for exchanges of views and advice on nuclear security measures, welcomes the increased recognition of the value of IPPAS (International Physical Protection Advisory Service), INSServ (International Nuclear Security Advisory Service) and INSSP missions by Member States, and notes with appreciation the organization by the Agency of meetings, to allow interested Member States to share experience and lessons learned, with due regard to the principle of confidentiality, and to make recommendations for improvements to these missions;

57. Requests the Secretariat to continue to strengthen its internal planning and results-based management within its mandate and to improve, where appropriate, measures of effectiveness for its nuclear security programme, and to keep Member States updated and informed on implementation in this regard in order to maintain overall oversight by Member States, including through the Programme and Budget;

58. Requests the Secretariat to continue paying due regard to the principle of professionalism and to promote workforce diversity, including gender equality and geographical diversity, in the context of its nuclear security activities, and encourages Member States to establish an inclusive workforce within their national nuclear security regimes, including providing equal access to education and training;

59. Notes with appreciation the IAEA Marie Skłodowska-Curie Fellowship Programme (MSCFP) and the Women in Nuclear Security Initiative (WINSI) and encourages Member States in a position to do so to contribute to them;

60. Encourages the Secretariat, in cooperation with Member States, to continue to develop and promote self-assessment methodologies and approaches that are based on Nuclear Security Series documents and can be used by Member States on a voluntary basis to ensure effective and sustainable national nuclear security infrastructure;

61. Encourages the Secretariat to further develop assistance to States upon their request in the relevant areas of importance to them to include prevention, detection and response;

62. Encourages Member States to make use of the IAEA Nuclear Security Information Management System (NUSIMS), on a voluntary basis;

63. Supports the steps taken by the Secretariat to ensure confidentiality of information relevant to nuclear security and requests the Secretariat to continue its efforts to implement appropriate confidentiality measures in conformity with the Agency's confidentiality regime and to report as

appropriate to the Board of Governors on the status of the implementation of the confidentiality measures;

64. Requests the Director General to submit an annual Nuclear Security Report to the General Conference at its sixty-seventh (2023) regular session on activities undertaken by the Agency in the area of nuclear security, and on external users of the ITDB and on past and planned activities of educational, training and collaborative networks, as well as highlighting significant accomplishments of the previous year within the framework of the Nuclear Security Plan and indicating programmatic goals and priorities for the year to come;

65. Encourages the Secretariat to consider developing, in close consultation with Member States, new nuclear security guidance to address the security risks and implications posed by armed attacks against nuclear facilities devoted to peaceful purposes, and further encourages the Agency to consider reflecting these aspects in further Nuclear Security Plans; and

66. Requests the Secretariat to implement the actions called for in this resolution in a prioritized manner within available resources.

General Conference

GC(66)/RES/8

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 15 of the agenda

(GC(66)/17)

Strengthening of the Agency's technical cooperation activities

Resolution adopted on 29 September 2022 during the seventh plenary meeting

A.

Strengthening the Agency's technical cooperation activities

1.

General

The General Conference,

- (a) Recalling resolution GC(65)/RES/10 on “Strengthening of the Agency’s technical cooperation activities”,
- (b) Bearing in mind that the objectives of the Agency, as stated in Article II of the Statute, are “to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world” and to ensure that the assistance provided by it is not used “to further any military purpose”,
- (c) Recalling that one of the statutory functions of the Agency, as stated in Article III of the Statute, is to “encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world”,
- (d) Acknowledging that developing countries, including least developed countries (LDCs), consider the technical cooperation (TC) programme as the major vehicle through which they benefit from this statutory function,
- (e) Recalling that the Statute and the Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency as contained in INFCIRC/267 are the Agency’s established guidelines for the formulation of the TC programme and the allocation of its resources, and also recalling other directives from the General Conference and the Board of Governors relevant to the formulation of the TC programme,

- (f) Recalling the Agency's relevant strategy for the coming years relating, inter alia, to providing effective technical cooperation, which was taken note of by the Board of Governors,
 - (g) Further recalling the Board of Governors' requirement, in light of the document GOV/1931 of 12 February 1979, that all Member States receiving technical assistance from the Agency should have signed a Revised Supplementary Agreement (RSA) Concerning the Provision of Technical Assistance by the Agency,
 - (h) Stressing the importance of the RSA,
 - (i) Recalling the adoption of the 2030 agenda for sustainable development and noting the report by the UN Secretary General entitled Progress towards the Sustainable Development Goals (E/2022/55), while also noting that the Ministerial Declaration of the 2022 High Level Political Forum on Sustainable Development recognizes inter alia that "years, or even decades, of development progress have been halted or reversed, due to multiple and widespread impacts of COVID-19, conflicts and climate change",
 - (j) Recalling the Brussels Declaration and the Istanbul Declaration on the LDCs and the Doha Programme of Action for Least Developed Countries for the Decade 2022-2031 (DPoA) adopted during the first part of the Fifth United Nations Conference on the Least Developed Countries,
 - (k) Taking into account that the TC programme of the Agency continues to be needs-based and implemented in a transparent and non-discriminatory manner,
 - (l) Stressing that INFCIRC/267 states, inter alia, that "the nature, extent and scope of technical assistance to be provided to the requesting State or group of States shall be defined by the Government or Governments concerned, and the assistance actually provided shall be in conformity with the Government's request and shall be given only to or through Governments", and that "if requested, the Agency shall help the Government or Governments concerned in defining the nature, extent and scope of the technical assistance being sought",
 - (m) Mindful of the increasing number of Member States requesting TC projects, which requires adequate resources for the Agency to meet these demands,
 - (n) Noting the substantive outcomes of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons relating to the Agency's TC activities,
 - (o) Recognizing that Member States and the Secretariat continue to work to promote transparency and accountability in project formulation, management, monitoring and evaluation of the TC programme,
 - (p) Mindful of the shared responsibility of all Member States towards supporting and enhancing TC activities of the Agency, and
 - (q) Recalling the International Conference on the IAEA Technical Cooperation Programme: Sixty Years and Beyond – Contributing to Development held in 2017 as part of the Agency's initiatives to strengthen the TC programme and, inter alia, to highlight the achievements of the TC programme in supporting Member States in meeting their socio-economic development priorities and also welcoming with satisfaction that the Conference participants recognized the benefits derived by Member States from the TC programme.
1. Requests that the Secretariat, when formulating the TC programme, should adhere strictly to the provisions of the Statute and the guiding principles and policies as contained in the Revised Guiding Principles and General Operating Rules (INFCIRC/267) and to the relevant directives from the General

Conference and the Board of Governors, and welcomes the Secretariat's efforts to ensure that TC projects are consistent with the Agency's Statute,

2. Calls upon all Member States receiving technical cooperation to sign an RSA Concerning the Provision of Technical Assistance by the Agency and implement its provisions; and

3. Requests the Secretariat to continue to assist Member States in the peaceful, safe and secure application of nuclear science and technologies;

2.

Strengthening technical cooperation activities

(a) Considering that the strengthening of technical cooperation activities in all fields of TC activities, in particular, food and agriculture, human health, water resource management, biotechnology, nanotechnology, environment, industry, knowledge management, and nuclear energy programming, planning and production will substantially contribute to the sustainable socio-economic development and help improve the quality of life and the well-being of the peoples of the world, and particularly those of developing Member States of the Agency, including the least developed ones,

(b) Stressing the importance of the development of nuclear technology and know-how and its transfer to and among Member States for peaceful uses in order to sustain and enhance their scientific and technological capabilities,

(c) Recognizing that the TC programme continues to contribute to the achievement of national and regional goals for sustainable development, particularly in developing countries,

(d) Further recognizing the growing contribution of the TC programme to the achievement of the Sustainable Development Goals (SDGs),

(e) Looking forward to the Agency's continued support to Member States, in particular through the TC programme, in realizing the SDGs in line with the principle of national ownership,

(f) Acknowledging that many Member States assign importance to climate change adaptation and mitigation through the use of nuclear power and nuclear applications and receive support from the TC programme, and recognizing the role of the Agency in this regard,

(g) Recognizing the Director General's initiative in selecting 'Rays of Hope: Cancer care for all' as a key focus area in 2022, as reflected in the Scientific Forum during the 66th General Conference, and aware of the role of TC projects in strengthening national and regional capacities in this regard,

(h) Conscious of the potential of nuclear power for meeting increasing energy requirements in a number of countries, and of the need for sustainable development, including environmental protection, and of the need for the application of the Agency's safety standards and nuclear security guidance to be applied in all uses of nuclear technology in order to protect humankind and the environment, and noting the Agency's support aimed at human resources and nuclear power infrastructure development,

(i) Taking note with appreciation of the activities being developed by the Agency in the field of nuclear knowledge management, education and training and particularly of the initiatives being emphasized by the TC programme in assisting national nuclear and other entities to build and enhance the basic infrastructure and regulatory framework in this field, and to further improve their technical capacity for ensuring sustainability,

- (j) Noting international cooperation through the Agency in providing support to Member States, upon request, in response to radiation overexposure accidents with a view to building their national capacities in this regard,
- (k) Noting the Agency support to Member States, upon request, in response to natural disasters, outbreaks as well as emergency situations, primarily through the TC programme, including in particular in support of Member States' and Non-Member States'¹ efforts to fight against COVID-19, as contained in documents GOV/INF/2020/6, GOV/INF/2021/4, GOV/INF/2021/33 and GOV/INF/2022/4-GC(66)/INF/2,
- (l) Welcoming the provision of assistance to Member States and Non-Member States¹, upon their request, through the interregional technical cooperation project INT0098: Strengthening Capabilities of Member States in Building, Strengthening and Restoring Capacities and Services in Case of Outbreaks, Emergencies and Disasters, and expressing appreciation to Member States for their extra-budgetary and in-kind contributions enabling the implementation of this project,
- (m) Recognizing that human capital planning, the development of human resources through scientific visits, fellowships and training courses, expert services and appropriate equipment supply continue to be important components of TC activities to ensure impact and sustainability, and expressing appreciation for the extra budgetary contributions of some States, as well as in-kind contributions such as, inter alia, experts, training courses and infrastructure, that make those TC activities possible,
- (n) Recognizing that human health, mainly cancer, has been the top priority for Member States over several TC programme cycles, as stated in GOV/INF/2019/2,
- (o) Recognizing the important role of the Agency in supporting Member States in comprehensive cancer control, including through the Programme of Action for Cancer Therapy (PACT) and in coordination with all relevant stakeholders, and noting that the establishment of a unified approach for the Agency's cancer control should contribute to strengthening and facilitating enhanced programmatic delivery to Member States, through, inter alia, enhancing coordination and systematic implementation of the Agency's cancer control related activities,
- (p) Recalling the report by the Director General entitled Addressing the Challenges Facing Least Developed Countries in the Peaceful Application of Nuclear Energy through the Technical Cooperation Programme (GOV/INF/2016/12), which was published in October 2016, and noting the provision of assistance through the TC programme to LDCs,
- (q) Recognizing the need for furthering the work of the Agency in promoting nuclear science, technologies and applications for peaceful uses, and their delivery to Member States through the Agency's TC programme, and the role of convening regular ministerial conferences,
- (r) Welcoming the Secretariat's ongoing efforts to promote gender equality throughout the TC programme, including the support shown to the International Gender Champions initiative,
- (s) Welcoming the development of the strategic frameworks for the TC programme by Member States in different regions, and
- (t) Welcoming the Ministerial Conference on Nuclear Science and Technology: Addressing Current and Emerging Development Challenges, and its Ministerial Declaration, held in Vienna in November 2018, where Member States reaffirmed their commitment to the Agency's objectives and functions, and recognized the important role of science, technology and innovation

¹ In accordance with GOV/2810 and GOV/2818.

in addressing the current challenges and meeting the common goals of achieving sustainable development,

1. Requests the Secretariat to continue to facilitate and to enhance the development of nuclear technology and know-how and its transfer to and among Member States for peaceful uses as embodied in the Agency's TC programme, taking into account and emphasizing the importance of specific needs of developing countries, including those of LDCs in line with Article III of the Statute, and encourages Member States to contribute in sharing knowledge and technology in the field of peaceful uses of nuclear energy;
2. Requests the Director General to continue to strengthen the Agency's TC activities, in consultation with Member States, through development of effective, efficient and outcomes oriented programmes aimed at promoting and improving the scientific, technological, research and regulatory capacities and capabilities of the Member States implementing projects, with account being taken of the infrastructure and the level of technology of the countries concerned, by continuing to assist them in their peaceful, safe and secure applications of atomic energy and nuclear techniques;
3. Requests the Secretariat, in close coordination with Member States, to continue its efforts to further advance gender mainstreaming and gender balance, including among experts and lecturers, in the TC programme and encourages Member States to cooperate closely with the Secretariat in this regard;
4. Requests the Director General to make every effort to ensure, where relevant, that the Agency's TC programme, taking into account specific needs of each Member State, particularly developing countries and LDCs, as well as the Agency's adoption of the 'technical cooperation among developing countries' (TCDC) modality in assisting LDCs, contributes to the implementation of the principles expressed in the Istanbul Declaration, the Programme of Action for the Least Developed Countries for the Decade 2011–2020 and to the attainment of the internationally agreed development goals, including the SDGs, and further requests the Director General to keep Member States informed of the Agency's activities in this regard;
5. Calls upon the Secretariat to continue to provide assistance to Member States, upon request, on climate change adaptation and mitigation through the use of nuclear power, and nuclear techniques, including through the TC programme;
6. Requests the Secretariat to continue, within the framework of the TC programme, to work actively to provide assistance and support services to Member States to identify and implement the lessons learned from the Fukushima Daiichi accident;
7. Requests the Secretariat to continue, within the framework of the TC programme, to work actively to render assistance and radiological support to the most affected countries in mitigating the consequences of the Chernobyl disaster and rehabilitating the contaminated territories;
8. Requests the Secretariat to continue examining in depth the specific characteristics and problems of the LDCs with respect to the peaceful applications of nuclear energy and, in this regard, also requests the Secretariat to continue to address this matter and to report accordingly in the Technical Cooperation Reports;
9. Requests the Secretariat to implement the new unified approach to cancer control as outlined by the Director General in his report GOV/INF/2019/2, in a manner that enables Member States to continue receiving robust support in maintaining, expanding and improving their cancer control capacity by integrating medical uses of ionizing radiation into a comprehensive cancer control programme that maximizes its effectiveness and public health impact;

10. Encourages the Secretariat to continue implementing the Programme Cycle Management Framework (PCMF) in phases, and to make it simpler and user-friendly so that Member States may use the tools effectively, and to take into account, in designing and implementing subsequent phases, difficulties experienced and concerns of Member States, including lack of adequate training, equipment and IT infrastructure in developing countries, particularly in LDCs;
11. Calls on the Secretariat to build on the lessons learned and experiences gained during the COVID-19 pandemic with a view to maintaining business continuity, enhancing the resilience of the TC programme and ensuring its effective delivery with the least possible disruption in the face of similar challenges in future; and
12. Requests the Secretariat to commence consultations with Member States towards convening a follow up to the 2018 Ministerial Conference on nuclear science, technology and applications and the TC programme in 2024 with a view to convening every four years thereafter;

3.

Effective execution of the technical cooperation programme

- (a) Reiterating the need to strengthen technical cooperation activities and to further enhance the effectiveness, efficiency, transparency and sustainability of the TC programme, specifically in accordance with Member States' requests, based on their needs and national priorities and emphasizing that all measures taken in this regard should also preserve and enhance the ownership of TC projects by recipient Member States,
- (b) Stressing the importance for the Agency of regular internal and external evaluations (as performed by the Office of Internal Oversight Services and the External Auditor, respectively), which contribute to achieving more effectiveness, efficiency, transparency and sustainability of the TC programme, with a view to having a positive impact on results,
- (c) Appreciating the efforts of the Secretariat in continuing to apply a two-step mechanism of quality assessment and review of the project designs for the 2022-2023 cycle, on the basis of TC quality criteria, in particular the central criterion of the Logical Framework Approach (LFA),
- (d) Noting that the key lessons from the review process carried out by the Secretariat in 2011 showed that consideration should be given to moving towards more focused and comprehensive projects, and that a differentiation in LFA treatment should be made between large, complex projects and small, simple ones,
- (e) Recognizing the growing number of Member States and their increasing demands on the TC programme, as well as the Agency's role in supporting Member States to achieve the SDGs, in line with the principle of national ownership, and the importance of enhancing within available resources the capacity of Agency staff to meet the needs of Member States, so as to effectively service Member States in line with the Agency's statutory requirements, in particular Articles II and III of the Statute, and further recognizing the valuable contribution of general service staff,
- (f) Recognizing the efforts of the Secretariat on outcome monitoring of the TC programme in an effective and efficient manner,
- (g) Recognizing that the Secretariat will continue to promote to the extent possible gender equality and equitable geographical representation in the Agency, especially at managerial levels, and recalling that the recruitment and retention of staff of the highest standards of efficiency, technical competence and integrity are essential for the success and impact of the Agency's programme, and

(h) Considering that the expanded use of the IAEA official languages would increase the universality of the TC programme and recalling in this regard the 2021 report by the Director General GOV/INF/2021/45 on multilingualism,

1. Urges the Secretariat to continue to work, in close cooperation with Member States, to strengthen TC activities, including the provision of sufficient resources, in accordance with Member States' requests based on their needs and national priorities, inter alia through ensuring that the components of TC projects, training, expertise and equipment are readily available to the Member States that have made such requests;
2. Requests the Secretariat, within available resources, to enhance TC project implementation capacity by ensuring that staff are adequately and appropriately assigned at all levels;
3. Also requests the Secretariat to give due consideration to qualified experts nominated by all Member States, particularly developing and LDCs, for participation in TC expert missions;
4. Welcomes and further encourages the continuing efforts of the Secretariat to optimize the quality, the number and the impact of TC projects and to create synergies among them, whenever feasible, and in coordination with the Member States concerned;
5. Requests the Secretariat to continue to provide Member States with adequate information and training on project development, including through e-learning, according to the LFA sufficiently in advance of their consideration by the Technical Assistance and Cooperation Committee and the Board of Governors;
6. Recognizes the importance of regular reporting on the implementation and outcomes of TC projects, urges Member States to adhere to all the requirements in this regard, welcomes the progress achieved and encourages further progress by Member States in the submission of their Project Progress Assessment Reports (PPARs), including through electronic PPARs and, in this regard, requests the Secretariat to continue to provide necessary guidance to Member States on improving their reporting, as appropriate;
7. Requests the Secretariat to continue its efforts to implement outcome monitoring in the TC programme, including, where appropriate, through the Country Programme Frameworks (CPFs);
8. Requests the Secretariat, when applying the two-step mechanism in monitoring the quality of TC projects, to reflect on the findings in the TC annual report in this regard, as appropriate;
9. Encourages the Secretariat and Member States to enhance adherence to the central criterion and all the TC requirements, and calls upon the Secretariat to guide Member States in this regard;
10. Requests the Secretariat to continue providing updates on the progress of TC programme implementation in between annual TC reports;
11. Stresses that the regular work of OIOS and the External Auditor should, within resources allocated to these offices from the Regular Budget, be consistent across all Major Programmes; further stresses that, in this context, OIOS should evaluate TC projects on the basis of specific outcomes achieved in relation to objectives outlined in the relevant CPF or national development plan and further requests the External Auditor to report the results to the Board of Governors; and
12. Encourages the Secretariat to continue to seek to carry out each TC project in the IAEA official language chosen by the beneficiary Member State, where possible;

4.

Technical cooperation programme resources and delivery

- (a) Recalling that the financing of TC should be in line with the concept of shared responsibility and that all Member States share a common responsibility towards financing and enhancing the TC activities of the Agency, and welcoming the contributions made by Member States, on a voluntary basis through government cost-sharing,
- (b) Stressing that the Agency's resources for TC activities should be sufficient, assured and predictable (SAP) to meet the objectives mandated in Article II of the Statute, and welcoming, in this regard, the Report of the Working Group on Financing the Agency's Activities (WGFAA), including to examine the ways and means to render resources for the Technical Cooperation Fund sufficient, assured and predictable (GOV/2014/49) and the recommendations contained therein, as well as the subsequent Progress Reports on the Secretariat's Implementation of the Recommendations of the WGFAA as contained in GOV/INF/2015/4 and GOV/INF/2016/7,
- (c) Recognizing that the Technical Cooperation Fund (TCF) target should be set at an adequate level, taking into account not only the growing needs of Member States but also funding capabilities, and mindful of the increasing number of Member States requesting TC projects,
- (d) Noting the decision of the Board of Governors, as contained in document GOV/2021/25, to set the target for voluntary contributions to the TCF at the level of €91 075 000 in 2022 and €92 600 000 in 2023, and that the Indicative Planning Figure (IPF) for 2024 shall be €92 600 000 and for 2025 shall be €92 600 000,
- (e) Recalling the statutory objective of the Agency to seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world, and recognizing the important contribution of its work through the TC programme in support of Member States, including in the attainment of the SDGs, and aware of the need for sufficient, assured and predictable resources,
- (f) Aware of the significant number of approved projects that remain unfunded (footnote-a/ projects) in the TC programme,
- (g) Also aware that the existence of a significant number of such projects also results in an increased workload on the Secretariat in terms of project planning and design review,
- (h) Stressing the importance of maintaining an appropriate balance between the promotional and other statutory activities of the Agency, and taking note of the decision of the Board, which — inter alia — notes that the synchronization of the TC programme cycle with the budget cycle provides a framework beginning in 2012, to consider appropriate increases to the resources for the TC programme, including the TCF target where such adjustments would take into account the changes in the level of the regular operational budget from 2009 onwards, the price adjustment factor and other relevant factors as contained in document GOV/2009/52/Rev.1,
- (i) Acknowledging the decision contained in GOV/2019/25 regarding the application of the due account mechanism with a view to guaranteeing the maximum quality of all national, regional and interregional TC projects as well as the TC programme,
- (j) Stressing that Major Programme 6 should be funded appropriately through the Regular Budget, and recalling the decision GOV/2011/37 that recommends — inter alia — one Working Group dealing with both the level of the Regular Budget and the TCF target,

- (k) Expressing appreciation to those Member States which have paid in full their TCF target shares and their obligatory National Participation Costs (NPCs) in a timely manner, noting the improvement in the number of Member States paying their NPCs and thus their strong commitment to the TC programme, and noting the Rate of Attainment of 2021, which was 95.2 %,
- (l) Encouraging Member States in a position to do so, to consider contributing on a voluntary basis through government cost-sharing to future national and regional TC projects, while recognizing that government cost-sharing is a sovereign decision,
- (m) Noting the use of the PCMF and emphasizing the need for assessing its impact on, inter alia, enhancing coordination, programme planning and the quality of programme delivery as well as increasing the implementation rate, and
- (n) Recognizing that the Agency requests that shipments of radioactive materials in the framework of the TC programme are carried out in compliance with the Agency's Regulations for the Safe Transport of Radioactive Material,
1. Stresses the need for the Secretariat to continue to work, in consultation with Member States, towards establishing means, including mechanisms, that would achieve the goal of making TC resources sufficient, assured and predictable;
 2. Urges Member States to pay in full and on time their voluntary contributions to the TCF, encourages Member States to pay their NPCs on time, and requests those which are in arrears with Assessed Programme Costs (APCs) to meet this obligation;
 3. Requests the Secretariat to ensure that the commencement of projects within a national programme will take place upon the receipt of at least the minimum payment of the NPCs without affecting the preparatory activities and that, in the event of a failure to pay any second instalment during a biennium, funding for a core project in the next biennium will be suspended until full payment is received;
 4. Requests the Secretariat to strictly apply the due account mechanism in line with all the elements contained in GOV/2019/25 with a view to guaranteeing the maximum quality of all national, regional and interregional TC projects as well as the TC programme;
 5. Further requests the Director General to continue to take account of the views of the General Conference when requesting Member States to pledge and pay their respective shares of the TCF targets and to make timely payments to the TCF;
 6. Requests the Secretariat, within available resources, to continue its support to Member States' development efforts, including the attainment of the SDGs;
 7. While cognizant of the diverse nature of export control regimes, urges Member States to work in close cooperation with the Agency to facilitate the transfer of necessary equipment for TC activities, in accordance with the Statute, in order to ensure that TC project implementation is not delayed by denials of necessary equipment supply to Member States;
 8. Requests the Secretariat to continue to actively seek resources to implement footnote-a/ projects;
 9. Encourages Member States in a position to make voluntary contributions to show flexibility as regards their use in order to enable the implementation of more footnote-a/ projects;
 10. Welcomes all extra budgetary contributions announced by Member States, including the Agency's Peaceful Uses Initiative, which is designed to raise extra budgetary contributions to Agency activities, and encourages all Member States in a position to do so to make contributions to meet this

goal, and requests the Secretariat to continue to work with all Member States in matching contributions to Member States' needs;

11. Encourages Member States to make full use of the tools to share voluntarily their CPFs and footnote-a/ project details, via the electronic search engine;

12. Requests that the actions of the Secretariat called for in this resolution that are not directly related to the implementation of TC projects be undertaken subject to the availability of resources; and

13. Calls upon the Agency to continue to take the necessary actions on the recommendations made by the WGFAA including to examine the ways and means to render resources for the TCF sufficient, assured and predictable, as contained in GOV/2014/49, GOV/INF/2015/4 and GOV/INF/2016/7;

5.

Partnership and cooperation

(a) Noting that interested Member States making their CPFs available to potential partners on a voluntary basis could facilitate additional cooperation and improve understanding of how TC projects respond to the needs of Member States,

(b) Recognizing that the 2030 Agenda for Sustainable Development presents another opportunity for partnership building and resource mobilization for the benefit of Member States,

(c) Appreciating the sustained increase in the number of United Nations Sustainable Development Cooperation Frameworks (UNSDCFs) signed by the Agency, resulting in improving coordination and collaboration with the UN and other partners, including towards the implementation of the SDGs, while emphasizing the role of the CPF as the main strategic planning tool of national TC programmes for Member States, and that by virtue of their specialized technical focus, some aspects of TC projects may not fit within UNSDCFs, which should not be a requirement for TC projects,

(d) Recognizing that national nuclear and other entities are important partners in the implementation of TC programs in Member States and in promoting the use of nuclear science, technology and innovation for achieving national development objectives, and recognizing also in this regard the role of the National Liaison Officers, the Permanent Missions to the Agency, the Programme Management Officer (PMO), the Project Counterparts (PCs) and the Technical Officers (TOs), and importance of coordination among them,

(e) Recalling previous resolutions favouring innovative educational partnerships — such as the World Nuclear University — involving academia, government and industry, and confident that such initiatives can, with the Agency's support, play a valuable role in promoting strong educational standards and building leadership for an expanding global nuclear profession,

(f) Appreciating the work done by the Agency in promoting partnerships with relevant partners and donors, including regional and multilateral organizations, as well as development agencies, and other entities, as appropriate, and recognizing that such partnerships can play a key role in further disseminating the contribution of the Agency in nuclear applications for peaceful uses, health, and prosperity; maximizing the impact of TC projects; and integrating TC activities into relevant international development frameworks,

(g) Noting with appreciation the Agency's efforts in building relationships with international organizations, as well as bodies and agencies within the UN system, which also contribute to achieving the SDGs, including the participation of representatives of the Agency in the United Nations High-Level Political Forum on Sustainable Development, and

(h) Recalling the approval of the Strategic Guidelines on Partnerships and Resource Mobilization, as contained in document GOV/2015/35, and, noting the 2021 progress report of the Director General on the implementation of these guidelines, encouraging the Secretariat to ensure that future regular reports are published in the year immediately following the reporting year so that they are aligned with the budget cycle while recalling the importance of keeping Member States regularly informed of developments in this regard,

1. Requests the Secretariat to continue to strengthen strategic partnerships and to work in close cooperation with Member States and other relevant partners with a view to assisting Member States in implementing the 2030 Agenda, in accordance with their national priorities, and optimizing the impact and benefits of the Agency's support, and requests the Secretariat to report on the implementation of these partnerships;
2. Requests the Secretariat to continue consultations and interactions with interested States, the competent organizations of the UN system, multilateral financial institutions, regional development bodies and other relevant intergovernmental and non-governmental bodies, to ensure the coordination and optimization of complementary activities, including by participating in relevant UN processes such as the High-Level Political Forum on Sustainable Development, and to ensure that they are regularly informed, where relevant, about the developmental impact of the TC programme, while aiming at achieving sufficient, assured and predictable resources for the TC programme;
3. Welcomes the Agency's participation and contribution with respect to South–South and triangular cooperation which is an essential tool in addressing common challenges of developing countries efficiently and effectively, as well as fostering the exchange of best practices and encourage networking, and in this regard, welcomes the Agency's cooperation with the United Nations Office for South–South Cooperation (UNOSSC) and its participation, in consultation with Member States, in the relevant fora and conferences, including the 2nd High-level UN Conference on South–South Cooperation held in 2019 in Buenos Aires, Argentina;
4. Requests the Director General to promote, in close consultation with Member States, TC activities supporting the self-reliance, sustainability and further relevance of national nuclear and other entities in Member States, particularly in developing countries, and, in this context, requests the Director General to continue and further enhance regional and interregional cooperation by (a) encouraging activities under and seeking complementarities between national projects and regional cooperation, including regional cooperation agreements, (b) identifying, utilizing and strengthening established regional capacities and resource centres or other qualified institutes, (c) formulating guidelines for the use of such centres and (d) strengthening guidance for partnership mechanisms; and in this regard to keep Member States informed of the Agency's activities;
5. Requests the Director General to resume and to further develop and facilitate cost-sharing, outsourcing and other forms of partnership in development by reviewing and amending or simplifying, as appropriate, relevant financial and legal procedures for these partnerships, to ensure that their objectives are specific, measurable, achievable, realistic and timely (SMART);
6. Notes the adoption of UN General Assembly resolution A/RES/72/279 on 'Repositioning of the United Nations development system in the context of the quadrennial comprehensive policy review of operational activities for development of the United Nations system' and encourages the Agency to identify and inform Member States of its possible impacts on the TC programme in any area, including resource mobilization, while noting the relationship between the Agency and the UN system and the nature, character and specificity of the TC programme; and
7. Requests the Secretariat to strengthen, as appropriate, its public communication, in all official languages of the Agency, on the impact of the TC activities, with a view to showcasing the contribution

of atomic energy, including to sustainable development, and to reaching out to new partners, and to regularly provide information to Member States in this regard;

6.

Implementation and reporting

1. Requests the Director General to report to the Board of Governors periodically and to the General Conference at its sixty-seventh (2023) regular session on the implementation of all the content of this resolution, highlighting significant accomplishments of the prior year and indicating goals and priorities for the year to come under an agenda item entitled “Strengthening of the Agency’s technical cooperation activities.

B.

Programme of Action for Cancer Therapy

The General Conference,

- (a) Recalling Part B of resolution GC(65)/RES/10, on the Programme of Action for Cancer Therapy (PACT), and previous resolutions requesting the Secretariat to undertake activities aimed at enhancing the capacities of developing countries in cancer control,
- (b) Concerned about the suffering of cancer patients and their families, the extent to which cancer threatens development, particularly in developing countries, and the alarming growth in cancer incidence, particularly in low- and middle-income countries (LMICs), as reported by the International Agency for Research on Cancer (IARC), which estimates that by 2040 cancer will cause 16.3 million deaths a year globally, with 67% of these deaths occurring in LMICs,
- (c) Also concerned that the economic impact of cancer is significant and increasing and recognizing the importance of adequate funding for cancer control programmes, especially in developing countries,
- (d) Noting that many Member States assign special priority to the Agency’s work on cancer control, and in this regard welcoming the Rays of Hope initiative launched on the margins of the 35th African Union Summit, which aims to integrate the breadth of the IAEA’s expertise to support Member States in the diagnosis and treatment of cancer using radiation medicine,
- (e) Taking note of the 2022 Scientific Forum entitled Rays of Hope: Cancer care for all,
- (f) Welcoming the provision of assistance to Member States upon their request, through the interregional technical cooperation project INT6064: Supporting Member States to Increase Access to Affordable, Equitable, Effective and Sustainable Radiation Medicine Services within a Comprehensive Cancer Control System, as well as the relevant national and regional technical cooperation projects,
- (g) Recalling the 58th World Health Assembly (WHA) resolution on cancer prevention and control (WHA58.22) adopted in May 2005 and updated by the 70th WHA (WHA70.12) in May 2017, which, inter alia, recognized the support given by the Agency to combat cancer, and welcomed the establishment of the Agency’s Programme of Action for Cancer Therapy,
- (h) Noting the progress made in the implementation of the 2030 Agenda for Sustainable Development, including the SDG target of reducing premature mortality from non-communicable diseases, including cancer, and emphasizing the important role the IAEA plays in this regard,

- (i) Noting the UN General Assembly Resolution A/RES/73/2(2018) on the Political Declaration of the Third High-Level Meeting of the General Assembly on the Prevention and Control of Non-Communicable Diseases, which expressed, among others, the high-level commitment of States to provide strategic leadership for the prevention and control of non-communicable diseases, and to scale up the implementation of the commitments made in 2011 (A/RES/66/2/(2011)) and 2014 (A/RES/68/300(2014)) for the prevention and control of non-communicable diseases through ambitious multisectoral national responses and thereby contribute to the overall implementation of the 2030 Agenda for Sustainable Development,
- (j) Recalling the WHO's Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013–2020, which has been extended to 2030 by the WHA, including a comprehensive global monitoring framework and targets for the prevention and control of NCDs, in particular, the attainment of the global target of 25% reduction in premature mortality by 2030, the Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem, launched in 2020, and the Global Noncommunicable Diseases Compact, launched in 2022,
- (k) Expressing appreciation for the ongoing discussions between the Secretariat and the WHO, including the IARC, on strengthening the WHO–IAEA Joint Programme on Cancer Control,
- (l) Recognizing that PACT embodies the peaceful use of nuclear technology for civilian and humanitarian purposes, and that the timely implementation of the Agency's relevant activities, enables Member States, particularly LMICs, to develop capacities to fight cancer in a comprehensive way that will improve the health and development of all regions, and promote other statutory activities of the Agency,
- (m) Noting the Report by the Director General on the Agency-Wide Support to Cancer Control, as contained in document GOV/INF/2019/2, and the 2017 Internal Audit Activity Report by the Director of the Office of Internal Oversight Services (OIOS) (GOV/2018/11), and further noting that all OIOS recommendations have been closed,
- (n) Noting the PACT Highlights in 2021 in the Technical Cooperation Report by the Director General (GOV/2022/19),
- (o) Noting the continued work of the Division of PACT, in cooperation with the relevant divisions of the Departments of Nuclear Sciences and Applications and Technical Cooperation, in coordinating mobilization of resources and the delivery of projects to Member States for cancer control related activities,
- (p) Recognizing the need to mobilize resources to support the Agency's cancer-related activities in Member States, and mindful of the urgency for the Division of PACT to have a defined strategy for resource mobilization in consultation with the WHO and other relevant stakeholders, as appropriate,
- (q) Acknowledging the value of sharing information about the needs identified by integrated review missions of PACT (imPACT), upon the agreement of the Member State concerned, with the WHO and other partners in order to facilitate coordination and efforts to mobilize resources to respond to such needs,
- (r) Noting efforts to enhance internal coordination mechanisms among all relevant Departments of the Secretariat towards establishing a unified approach for cancer control, in line with the conclusion of the Ad Hoc Task Force on PACT², through which all cancer-related

² Established by the Director General in 2018 (GOV/INF/2019/2).

activities of the Agency to support Member States shall be planned and delivered in a coordinated manner,

(s) Recognizing the increasing number of requests from Member States for assistance in projects related to cancer control, including capacity-building as well as diagnostic, imaging and radiotherapy infrastructure improvements,

(t) Expressing appreciation for the financial and other contributions and pledges made by Member States and others in support of PACT and the Rays of Hope initiative,

(u) Recognizing that regional efforts, with the support of regional WHO offices, can assist Member States in developing comprehensive national cancer control plans (NCCPs) suited to their requirements through knowledge and experience sharing,

(v) Recognizing the value of imPACT review missions as a tool for comprehensive assessment and their usefulness in the planning of integrated cancer control programmes, and noting the importance of follow-up activities to support the implementation of imPACT review mission recommendations,

(w) Noting with concern the increasing difficulty of retaining qualified medical professionals in LMICs, and recognizing the need for these trained professionals, along with facilities and equipment, for sustaining adequate cancer care capacity, and

(x) Noting the need for the development of education and training materials on cancer and further noting mechanisms such as the Agency's Human Health Campus organized by the Division of Human Health (NAHU) of the Department of Nuclear Sciences and Applications to meet this need,

1. Commends the Secretariat for the continued progress made in the establishment of partnerships with Member States, other international organizations and private entities, taking into consideration the relevant UN General Assembly resolutions and urges the Secretariat to foster the development and deployment of cost-effective, affordable, accessible, quality and reliable systems for the diagnosis and radiation treatment of cancer patients through such partnerships;

2. Calls on the Department of Technical Cooperation and its Division of PACT, in coordination with the Department of Nuclear Sciences and Applications and its Division of Human Health, to continue to harness the benefits that may be derived from the WHO-IAEA Joint Programme on Cancer Control, particularly in terms of accelerated programme delivery to Member States, strengthened public health approaches to cancer control and increased resource mobilization potential; and in this context, requests the Division of PACT to undertake follow up actions, in view of the expected conclusion of the WHO's Global Action Plan by 2030;

3. Calls on the Secretariat to follow up on the outcomes and the recommendations of the high-level meetings on the prevention and control of NCDs, particularly cancer, including by assisting developing countries to adopt and implement a comprehensive approach to cancer control, as appropriate, and to continue its coordination with the WHO, IARC and other relevant stakeholders;

4. Calls on the Secretariat to continue implementing its framework for collaboration, including joint project development and resource mobilization, with the WHO and the IARC, and to keep Member States informed of relevant developments;

5. Requests the Director General to continue advocating and building support for the Agency's work on cancer control, including by mobilizing resources for the implementation of PACT, the relevant TC projects and the Rays of Hope initiative as one of the priorities of the Agency;

6. Calls on the Division of PACT, in coordination with other relevant divisions, in consultation with the WHO and other partners, to harmonize its approaches to helping Member States to develop their financial proposals and relevant bankable documents to mobilize resources for establishing and expanding radiation medicine infrastructure for comprehensive cancer control;
7. Requests the Division of PACT to continue to implement effective management systems including the relevant recommendations contained in GOV/2018/11;
8. Calls upon the Division of PACT, in coordination with other relevant divisions, and in consultation with other relevant Agency Departments and the WHO, as appropriate, to strengthen its support to developing Member States in establishing integrated and comprehensive national cancer control plans, involving the full participation of other organizations and agencies in a way to facilitate and assist the activities of the member states to achieve the SDG target of reducing premature mortality from non-communicable diseases, including cancer, by one third by 2030;
9. Notes the continuing need for sufficient human resources for the implementation of cancer control related projects using extra-budgetary funds and the provision of experts, welcomes the extra budgetary and in-kind resources provided to date, and calls on Member States to continue providing support, funding and experts to adequately fulfil the needs of the Division of PACT and Human Health (NAHU);
10. Calls on the Division of PACT to continue the development and implementation of joint projects within the framework of the WHO–IAEA Joint Programme on Cancer Control towards its effective implementation, noting that national integrated work plans on cancer control under this framework were developed or are currently underway for some Member States;
11. Recommends the continuous development, in consultation with Member States, of imPACT review missions as an Agency service available for Member States and calls on the Division of PACT to focus on follow-up activities that build on the findings of imPACT review missions and translate the recommendations into actions with sustainable impacts for Member States, and to inform Member States of relevant updates;
12. Calls upon the Division of PACT to continue to support Member States' access to safe, quality and affordable diagnostic and radiotherapy health technologies, as appropriate, with the involvement of all relevant stakeholders, and also calls on the Division of PACT to keep Member States informed of developments in this regard;
13. Welcomes the continued support provided by the Secretariat for the participation of health professionals working in LMICs, in training courses, workshops and fellowships on cancer control planning, medical physics, nuclear medicine, radiation oncology, radionuclide production, and calls on the Secretariat to continue facilitating such activities;
14. Notes the inclusion of cancer-related topics in the IAEA Human Health Campus, and requests the Secretariat to seek to make these training materials available for use by appropriate health professionals from all regions, including, in line with the importance of multilingualism;
15. Requests the Director General to continue seeking, strengthening and facilitating the Agency's involvement in international partnerships, to further pursue, develop and implement PACT, and requests the Director General to continue formalizing, where feasible and appropriate, PACT's collaboration with partners for the more effective development and implementation of country-level, regional-level and interregional-level cancer projects;
16. Notes the ongoing work of the Division of PACT in mobilizing resources, including resources mobilized by partners, for cancer-related Technical Cooperation projects, and urges the Division of PACT to work on and strengthen its programme strategy and planning as well as strategy for

mobilization of additional resources from traditional and non-traditional donors to support the implementation of cancer-related activities of the Agency, including the Rays of Hope initiative, as well as to support Member States in their resource mobilization efforts;

17. Calls upon the Director General to ensure that the Division of PACT strengthens capacities and mechanisms to facilitate and support cancer control-related resource mobilization, its existing competence and its access to relevant technical expertise required to optimize the Agency's efforts in cancer control;

18. Invites Member States, organizations, private foundations and other donors to provide adequate financial support for the implementation of PACT and the Rays of Hope initiative, and calls upon the Secretariat to keep Member States informed about progress in this regard;

19. Commends the Secretariat, especially the Division of PACT, for its efforts to highlight the active role of the Agency supporting Member States' efforts to address cancer through participation at key global health events, including the WHA; the World Health Summit; the African First Ladies Against Breast, Cervical and Prostate Cancer; the World Cancer Leaders' Summit; the World Cancer Congress; the WHO Regional Committee meetings; the London Global Cancer Week; and the AORTIC International Conference on Cancer in Africa;

20. Calls on the Secretariat to continue to raise awareness about the global cancer burden and the role of radiation medicine in cancer diagnosis and treatment as the first link in a chain that connects cancer diagnosis and treatment to the control of non-communicable diseases in international fora; and

21. Requests the Director General to report in the annual Technical Cooperation Report on the implementation of this resolution to the General Conference at its sixty-seventh (2023) and sixty-eighth (2024) regular sessions.

General Conference

GC(66)/RES/9

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 16 of the agenda
(GC(66)/17)

Strengthening the Agency's activities related to nuclear science, technology and applications

Resolution adopted on 29 September 2022 during the seventh plenary meeting

A.

Non-power nuclear applications

1.

General

The General Conference,

- (a) Noting that the Agency's objectives as outlined in Article II of the Statute include "*to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world*",
- (b) Noting also that the statutory functions of the Agency as outlined in Article III of the Statute, paragraphs A.1 to A.4, include encouraging research and development and fostering the exchange of scientific and technical information and the training of scientists and experts in the field of peaceful uses of atomic energy, with due consideration for the needs of developing countries,
- (c) Noting that the United Nations General Assembly, in resolution 64/292, called upon States and international organizations to provide financial resources, capacity building and technology transfer, through international assistance and cooperation, in particular to developing countries, in order to scale up efforts to provide safe, clean, accessible and affordable drinking water and sanitation for all,

- (d) Noting that the United Nations General Assembly, in resolution 66/288, endorsed the outcome document of the United Nations Conference on Sustainable Development, entitled “The future we want”, which recognized the importance of strengthened national, scientific and technological capacities for sustainable development, and to this end, supported building science and technology capacity, with both women and men as contributors and beneficiaries, including through collaboration among research institutions, universities, the private sector, governments, non-governmental organizations and scientists,
- (e) Appreciating the adoption of the 2030 Agenda for Sustainable Development by the United Nations General Assembly of 2015 (A/RES/70/1), and welcoming the Secretariat activities that contribute to fostering sustainable development and protecting the environment,
- (f) Noting that the United Nations General Assembly Resolution 71/312 endorsed the declaration entitled “Our ocean, our future: call for action” which calls upon all stakeholders to conserve and sustainably use the oceans, seas and marine resources for sustainable development,
- (g) Noting that for the ten-year period from 2021–2030, the United Nations General Assembly has proclaimed a Decade of Ocean Science for Sustainable Development (Resolution 72/73), and a Decade on Ecosystem Restoration (Resolution 73/284),
- (h) Stressing the importance of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change,
- (i) Noting the Medium Term Strategy as noted by the Board of Governors,
- (j) Taking note of the *Nuclear Technology Review 2022* (document GC(66)/INF/4),
- (k) Stressing that nuclear science, technology and applications address and contribute to a wide variety of basic socio-economic human development needs of Member States, in such areas as health, nutrition, food and agriculture, water resources, environment, industry, materials, and energy, and noting that many Member States, both developing and developed, benefit from the application of nuclear techniques in all the above areas,
- (l) Recognizing the success of science and technology studies in enhancing scientific communication and their contribution to training the trainer,
- (m) Acknowledging that the IAEA Collaborating Centres scheme supports the Agency in its mandate to encourage research and development and foster the exchange of scientific and technical information and the training of scientists and experts in the field of peaceful uses of atomic energy, with due consideration for the needs of developing countries and noting that, at the end of 2021, the Agency had 56 active Collaborating Centres in 29 Member States, 40 of which are in fields related to non-power nuclear applications,
- (n) Acknowledging the need for increasing the capacity of Member States for using advanced nuclear techniques at all stages of management of communicable and non-communicable diseases, including cancer, and aware of the need to develop performance indicators for measuring such capacity, including access, quality and outcomes,
- (o) Acknowledging that the Agency, as a member of the United Nations Crisis Management Team for COVID-19¹ and in coordination with the World Health Organization (WHO), continues

¹ World Health Organization (lead organization), United Nations Development Coordination Office, United Nations Office for the Coordination of Humanitarian Affairs, International Maritime Organization, United Nations Department of Safety and Security, United Nations Children’s Fund, International Civil Aviation Organization, World Bank, World Food Programme,

to provide assistance to States² in fighting COVID-19 through the provision of equipment and training during the COVID-19 pandemic,

(p) Recognizing the Agency's maintenance and development work in databases that provide Member States with information on the international distribution of radiotherapy and nuclear medicine technologies, such as the Directory of Radiotherapy Centres (DIRAC), the Nuclear Medicine Database (NUMDAB), the IAEA Medical Imaging and Nuclear Medicine Global Resources Database (IMAGINE), the IAEA/World Health Organization (WHO) Network of Secondary Standards Dosimetry Laboratories (SSDL Network) services, dosimetry audit networks, and the Doubly Labelled Water database,

(q) Recognizing that independent external peer reviews, forming part of a comprehensive quality assurance programme, are an effective tool for quality improvement of the radiation medicine practice, and appreciating the Secretariat's efforts in developing the peer-review mechanisms in nuclear medicine, diagnostic radiology and radiotherapy,

(r) Aware of the innovative use of IT tools in capacity building and educational tools in human health through the well-developed IAEA Human Health Campus, and welcoming e-learning tools in the area of strategic planning, forensic science and site remediation,

(s) Noting the increasing demand from Member States in nuclear applications for human health and recognizing the importance of the continued Agency-wide collaboration with the WHO,

(t) Noting the events sponsored by the IAEA Nobel Peace Prize Cancer and Nutrition Fund and aware of an increase in requests from Member States for cooperation and capacity building in the field of infant and young child nutrition, micronutrient nutrition and prevention of obesity related non-communicable diseases, and welcoming the signing of Practical Arrangements with the British Nutrition Society, the Federation of African Nutrition Societies, and the Federation of European Nutrition Societies,

(u) Aware of the need of the Agency to increase the capacity of Member States in the field of medical radiation dosimetry, and welcoming the continued support provided to the harmonization of radiotherapy dosimetry worldwide through the IAEA/WHO postal dosimetry audit service,

(v) Recognizing the Agency's successes at establishing traditional and non-traditional partnerships and expecting further efforts from the Agency to improve partnerships with relevant partners and donors, including regional and multilateral organizations, as well as development agencies and other entities and successful significant funding with non-conventional partners, notably in human health,

(w) Recognizing the efforts of the Agency to promote the education and training of radiation medicine specialists, including medical physicists and the success of the International Centre for Theoretical Physics (ICTP) Master of Advanced Studies programme in Medical Physics, based on Agency guidelines,

(x) Recognizing the role of the Agency in supporting Member States to tackle the burden of non-communicable diseases, especially cardiovascular diseases and neurodegenerative conditions,

Food and Agriculture Organization of the United Nations, United Nations Department of Global Communications, Executive Office of the Secretary-General, Department of Political and Peacebuilding Affairs/Department of Peace Operations, Department of Operational Support.

² In accordance with GOV/2810 and GOV/2818.

- (y) Stressing the importance of continued assistance to Member States, in collaboration with external partners, in the fight against cancer, particularly cancers affecting women and children,
- (z) Recognizing the close collaboration with WHO and the United Nations Interagency Task Force on the Prevention and Control of Non-Communicable Diseases (UNIATF) and noting the continuing activities within the UN Joint Global Programme on Cervical Cancer Prevention and Control as well as participation in the WHO-led initiative for cervical cancer prevention and control and the Global Initiative for Childhood Cancer,
- (aa) Welcoming the Rays of Hope initiative launched on the margins of the 35th African Union Summit 2022, which aims to integrate the breadth of the Agency's expertise to support Member States in the diagnosis and treatment of cancer using radiation medicine,
- (bb) Recognizing the contribution of public-private partnerships and resource mobilization in providing support for educational activities and Coordinated Research Projects (CRPs),
- (cc) Noting that the Dosimetry Laboratory services have been expanded to enhance dosimetry in hospitals and the development of education and training activities, and noting the opening of the linear accelerator (LINAC) facility in Seibersdorf in June 2019 that increases the Agency's capacity to provide dosimetry services,
- (dd) Acknowledging the long-term benefits of CRPs and their resulting publications in the development and practical application of nuclear technologies for peaceful uses and their possible positive impact on the Technical Cooperation programme, while recognizing their differences, and urging the Secretariat to further ensure benefits from possible synergies and avoid duplication in this regard,
- (ee) Further recognizing the successful cooperation and significant results being achieved by the Food and Agriculture Organization of the United Nations (FAO) and the Agency through the Joint FAO/IAEA Centre for Nuclear Techniques in Food and Agriculture and its associated FAO/IAEA Agriculture and Biotechnology Laboratories in Seibersdorf, including in the area of Climate Smart Agriculture for resilient and sustainable adaptation to climate change in food and agriculture in developing countries,
- (ff) Welcoming the support of the Joint FAO/IAEA Centre to control certain disease and pest outbreaks in Africa, Latin America and the Caribbean, Asia and Europe,
- (gg) Recognizing the need for preventive measures and the importance of addressing the challenges posed by climate change and the rise in disease and pest outbreaks that harm human, animal and plant health,
- (hh) Further recognizing the success of the sterile insect technique (SIT) in the suppression or eradication of populations of insect pests, that can harm human, animal and plant health,
- (ii) Aware of the activities of the Latin American and Caribbean Analytical Network (RALACA), composed of 69 national food safety laboratories/institutes in 21 countries in Latin America and the Caribbean, and the African Food Safety Network (AFoSAN) of 102 national food safety laboratories/institutes in 43 African countries, to address food contamination issues and improve environmental and food safety with health, trade and economic benefits; and the 77 laboratories of the Veterinary Disease Diagnostic Laboratories Network (VETLAB Network) of 46 African countries and 19 Asian national animal disease diagnostic laboratories to disseminate the use of nuclear techniques for the diagnosis and control of transboundary animal and zoonotic diseases, as well as the Plant Mutation Breeding Network (MBN) of 13 countries in

the Asia Pacific Region to promote R&D activities and foster regional cooperation in the field of plant mutation breeding, related biotechnology and mutant germplasm exchange in the region,

(jj) Recognizing the work conducted at the Agency's Nuclear Applications (NA) Laboratories in performing applied and adaptive R&D, developing standards, protocols and guidelines, as well as providing training and specialized services to benefit Member States, and welcoming the commissioning of the deuterium–deuterium based neutron generator as part of the Neutron Science Facility (NSF) in Seibersdorf, allowing the Agency to offer training and diverse practical applications using neutrons, such as neutron activation analysis, neutron radiography/tomography, delayed neutron counting, and neutron detection experiments,

(kk) Welcoming the ongoing modernization of the NA Laboratories in Seibersdorf including the ReNuAL 2 project contributing to R&D activities and supporting access to nuclear applications to Member States and the Agency's effort in building traditional and non-traditional partnerships to mobilize resources for these projects,

(ll) Noting that the Agency has compiled and disseminated isotope data on aquifers and rivers worldwide and is addressing links between climate change, rising food and energy costs and the global economic crisis, with the aim of assisting decision-makers in adopting better management practices for integrated water resources management and planning, especially for surface water related to agricultural use,

(mm) Noting ongoing cooperation and partnership between the United Nations Environment Programme (UN Environment) and the Agency, particularly in the context of marine pollution and the Regional Seas Programme, and the increasing demand from Member States in nuclear applications for environmental management, and further noting that the Agency hosted the 48th annual session of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), held virtually in September 2021,

(nn) Recognizing the Agency's unique capabilities in contributing to global efforts to protect the environment, including terrestrial, riverine, coastal and marine ecosystems, and aware of the significant contribution nuclear science can make to addressing environmental challenges such as climate change, coastal and ocean pollution, microplastics, threatened habitats, and endangered species,

(oo) Recognizing the Nuclear Technology for Controlling Plastic Pollution (NUTEC Plastics) initiative, which builds on the Agency's efforts to assist Member States deal with plastic pollution through recycling using radiation technology and marine monitoring using isotopic tracing techniques,

(pp) Noting with appreciation the work of the Agency over many decades to assist analytical laboratories and research facilities in Member States to improve their analytical performance by organizing regular proficiency tests, inter-laboratory comparisons, and producing certified reference materials from a wide range of environmental matrices,

(qq) Aware of the ALMERA network of Analytical Laboratories for the Measurement of Environmental Radioactivity providing accurate measurement for monitoring radioactivity in the environment, represented with 195 laboratories from 90 Member States,

(rr) Acknowledging the important contribution of the Ocean Acidification International Coordination Centre at the IAEA Marine Environment Laboratories to the coordination of activities supporting a better understanding of the global effects of ocean acidification, and welcoming the significant support for the Centre provided by a number of Member States,

(ss) Recognizing the increasing use of radioisotopes and radiation technology in healthcare practices, sanitation and sterilization, industrial process management, environment remediation, food preservation, crop improvement, new materials development and analytical sciences, and in assessing the impacts of climate change,

(tt) Noting the importance of molybdenum-99 availability for medical diagnosis and treatment, and acknowledging with appreciation the efforts made by the Agency, in coordination with other international organizations, Member States and relevant stakeholders, to facilitate a reliable supply of molybdenum-99 by supporting the development of Member States' abilities to generate, for their indigenous needs and for export, the non-HEU-based production of molybdenum-99 and technetium-99m, where technically and economically feasible, including research into the accelerator-based alternative production of technetium-99/molybdenum-99,

(uu) Aware of the new cooperative initiatives that have emerged to provide reactor irradiation services, of the significant advances reported in the development of new molybdenum-99 production facilities and the expansion of existing facilities, and of the continued interest of many countries in establishing non-HEU-based molybdenum-99 production facilities to meet domestic needs, for export and/or to serve as a partial reserve capacity,

(vv) Noting the expanding use of positron emission tomography/computed tomography (PET-CT) and therapeutic radiopharmaceuticals and acknowledging the efforts taken by the Secretariat in planning appropriate activities to address the needs for production of hospital prepared therapeutic radiopharmaceuticals and their use following the applicable national regulatory requirements,

(ww) Noting the role of the Agency in assisting Member States in establishing and strengthening the personalized medicine approach using nuclear techniques including diagnostic radiology, nuclear medicine and radiotherapy,

(xx) Recognizing the role of ion beam accelerators and synchrotron radiation sources in research and development in material science, environmental science, bio- and life sciences and cultural heritage, and welcoming the convening of the International Conference on Accelerators for Research and Sustainable Development: From Good Practices Towards Socioeconomic Impact and of the Second International Conference on Applications of Radiation Science and Technology by the Agency in Vienna, in May and August 2022 respectively,

(yy) Aware of the problems of pollutants arising from urban and industrial activities and the potential of radiation treatment to address some of them, including industrial wastewaters, and noting the initiative taken by the Agency to explore the use of radiation technology for waste water treatment and the remediation of pollutants in Member States through coordinated research activities (CRAs),

(zz) Taking note of the high potential of electron beams as a source of radiation for the treatment of materials and pollutants, and the attenuation of bio-hazard materials and of pathogens for the development of vaccines and acknowledging the encouraging results produced through the related CRPs,

(aaa) Noting the potential areas for application of artificial intelligence, machine learning and data science in various fields of nuclear science, technology and applications,

(bbb) Recognizing the importance of nuclear instrumentation in the monitoring of nuclear radiation and nuclear materials in the environment and noting with appreciation the development of instruments for monitoring surface radioactivity and the provision of services to requesting Member States for the mapping of their land,

(ccc) Acknowledging the multiple uses of research reactors, also within national research nuclear centres and universities, as valuable tools for, inter alia, education and training, research, radioisotope production and materials testing and also as a learning tool for Member States that are considering the introduction of nuclear power,

(ddd) Aware that greater regional and international cooperation, including regional research reactor coalitions and International Centres based on Research Reactors (ICERRs), will be needed to ensure broad access to research reactors, owing to the fact that older research reactors are being replaced by fewer multi-purpose reactors, resulting in a drop in the number of operational reactors and noting with appreciation the Secretariat's integrated and systematic support to countries embarking on their first research reactor project and the recent efforts to promote support for optimizing utilization of research reactors through the Integrated Research Reactor Utilization Review (IRRUR) mission,

(eee) Acknowledging that the peaceful use of fusion energy can be advanced through increased international efforts and with the active collaboration of interested Member States and international organizations, such as the International Thermonuclear Experiment Reactor (ITER) project group, in fusion-related projects, appreciating the efforts taken in leading the demonstration fusion power plant (DEMO) and noting the first four meetings of the Nuclear Fusion Coordination Committee to manage cross-cutting activities related to fusion,

(fff) Confirming the important role of science, technology and engineering in enhancing nuclear and radiation safety and security, and the need to resolve the issues of managing radioactive waste in a sustainable manner,

(ggg) Noting with appreciation the on-going efforts of the Secretariat, together with Member States, under the programme and budget for 2022–2023, to allocate sufficient resources to renovate the Agency's NA Laboratories at Seibersdorf with facilities and equipment that are fully fit-for-purpose and to ensure that maximum benefits in terms of capacity building and technology enhancement are made available to Member States, particularly developing countries, and

(hhh) Welcoming the progress of the IAEA Marie Skłodowska-Curie Fellowship Programme (MSCFP) with the objective to encourage women to pursue a professional career in the field of peaceful uses of nuclear sciences and technology and non-proliferation, as well as the support offered by various Member States to the MSCFP,

1. Requests the Director General, in conformity with the Statute, to continue to pursue, in consultation with Member States, the Agency's activities in the areas of nuclear science, technology and applications, with special emphasis on supporting the development of nuclear applications in Member States with a view to strengthening infrastructures and fostering science, technology and engineering for meeting sustainable growth and development needs of Member States in a safe manner;
2. Requests the Secretariat to fully utilize the capacities of Member State institutions through appropriate mechanisms in order to expand the extent to which nuclear sciences and applications are utilized to achieve socio-economic benefits and looks forward to the Agency's contribution to Member States' implementation of the 2030 Agenda for Sustainable Development (A/RES/70/1), as well as the Paris Agreement on climate change;
3. Underlines the importance of facilitating effective programmes in the areas of nuclear science, technology and applications aimed at pooling and further improving the scientific and technological capabilities of Member States through CRPs within the Agency and between the Agency and Member States and through direct assistance, and urges the Secretariat to further strengthen capacity building for Member States, particularly through interregional, regional and national training courses and fellowship

training in the areas of nuclear science, technology and applications, and expanding the scope and outreach of CRAs and relying on the IAEA Collaborating Centres scheme;

4. Urges the Secretariat to communicate the benefits of various applications of nuclear technologies for development that could benefit Member States and to address the needs for human resource training in these applications;

5. Requests the Secretariat to commence consultations with Member States towards convening a follow up to the 2018 Ministerial Conference on nuclear science, technology and applications and the Technical Cooperation Programme in 2024 with a view to convening every four years thereafter;

6. Urges the Secretariat to continue implementing efforts that contribute to greater understanding and a well-balanced perspective of the role of nuclear science and technology in sustainable global development, including the relevant commitments, and future efforts on climate change mitigation, monitoring and adaptation;

7. Welcomes all contributions announced by Member States, institutions and the private sector, including through the IAEA Peaceful Uses Initiative, as extra budgetary and in-kind contributions to the Agency;

8. Calls upon the Secretariat to continue to address identified priority needs and requirements of Member States in the areas of nuclear science, technology and applications, such as:

- i. use of radioisotopes and radiation in human health, including through enhancing access and quality,
- ii. nuclear applications related to food and agriculture, such as climate-smart agriculture, land and water management, food safety and security, and crop improvement and management in light of climate change,
- iii. use of the SIT to establish tsetse-free zones and fruit fly free and low prevalence areas, and to combat mosquitoes transmitting diseases including dengue, malaria, chikungunya and zika,
- iv. application of nuclear-derived techniques for early, rapid diagnosis and control of transboundary animal and zoonotic diseases,
- v. measurement of environmental radioactivity and radiation,
- vi. unique applications of isotopes to track the global uptake of carbon dioxide by the oceans and the resulting acidification effects on marine ecosystems,
- vii. use of radioisotopes and stable isotopes to assess risks to seafood safety, including heavy metals, persistent organic pollutants, microplastics and biotoxins,
- viii. use of isotopes in the protection of threatened habitats and endangered species,
- ix. use of isotopes in groundwater management,
- x. use of cyclotrons, research reactors and accelerators for the production of affordable radiopharmaceuticals, and
- xi. use of radiation technology for development of novel materials, in the treatment of waste water, flue gases and other pollutants resulting from industrial activities, as well as for the preservation of cultural heritage;

9. Requests the Secretariat to continue to support Member States through CRPs and to encourage appropriate resource mobilization to support these efforts;

10. Encourages strengthening mutual cooperation between Member States to exchange information on relevant experiences and good practices on water resources management in synergy with the UN system organizations dealing with water resources management;
11. Urges the Secretariat to continue strengthening the IAEA–UN Environment partnership, in close consultation with Member States to further explore the possibility for a formalized cooperation, such as a joint programme between the IAEA and UN Environment to increase access to beneficial projects and information bearing in mind the need to avoid duplication;
12. Takes note with appreciation of the continued efforts of the Secretariat with Member States party to a Regional Cooperative Agreement (RCA) for Research, Development and Training Related to Nuclear Science and Technology and encourages the Secretariat to develop and disseminate IT tools in various areas of nuclear applications;
13. Urges the Secretariat to continue to strengthen the IAEA–WHO partnership;
14. Requests the Secretariat to assist Member States upon request in their activities to mitigate the impact of cancer, particularly female and childhood cancers, with proper prevention, diagnosis, treatment and symptom management mechanisms;
15. Encourages Member States to make use of the existing peer-review mechanisms in radiation medicine to strengthen quality diagnosis and patient treatment;
16. Calls for the support of the Agency in setting guidelines for the adoption of advanced techniques and equipment in radiation medicine in Member States;
17. Recognizes the success of the Agency’s laboratory Networks, such as VETLAB, ZODIAC, RALACA, AFoSaN and MBN, in prompting R&D activities on nuclear science and applications, disseminating the use of nuclear techniques for food and agriculture and facilitating the international cooperation in nuclear applications, including through south–south and triangular partnerships, and therefore requests the Secretariat to further increase the support to strengthen and expand these Networks enabling them to fully and effectively undertake technology transfer, capacity building in R&D activities and emergency response for the benefit of Member States;
18. Requests the Secretariat to continue to provide to interested Member States, upon request, technical assistance regarding production and transport of medical isotopes and radiopharmaceuticals;
19. Requests the Secretariat to continue providing assistance to Member States with capacity building for the development, production and quality control of new generations of therapeutic radiopharmaceuticals (such as alpha emitters);
20. Requests the Secretariat to continue providing assistance with capacity building for quality assurance in radiopharmaceutical development and the use of radiation technology in industries and disseminating radiation technology guidelines based on international quality assurance standards;
21. Urges the Secretariat to continue to implement activities that will contribute to securing and supplementing the molybdenum-99/technetium-99m production capacity, including in developing countries, in an effort to ensure the security of supplies of molybdenum-99 to users worldwide and further urges the Secretariat to continue its cooperative work towards this goal with related initiatives undertaken by other international organizations such as the OECD Nuclear Energy Agency;
22. Requests the Secretariat, upon request from interested Member States, when technically and economically feasible, to provide technical assistance to emerging national and regional efforts to establish non-HEU based molybdenum-99 production capabilities, and to provide technical assistance to transition existing production capabilities to utilize non-HEU-based methods and facilitate training

activities such as workshops to support Member States in their efforts to achieve self-sufficiency in local production of medical radioisotopes and radiopharmaceuticals;

23. Urges the Secretariat to continue exploring the use of accelerators for various radiation technology applications and to facilitate demonstrations and training for interested Member States;

24. Requests the Secretariat to make efforts together with Member States in developing industrial irradiation facilities such as electron accelerators and their accessories for use in, inter alia, healthcare practices, crop improvement, food preservation, industrial applications, sanitization and sterilization, and further requests the provision of technical support for the use of research reactors in the production of radiopharmaceuticals and industrial radioisotopes;

25. Requests the Secretariat, in collaboration with interested Member States, to continue with the development of appropriate instruments and to make available, to requesting Member States, services for the rapid and economic mapping of radioactivity on the Earth's surface;

26. Requests the Secretariat to strengthen the Agency's activities in the area of fusion science and technology in view of the advances in nuclear fusion research at ITER and worldwide and to continue the DEMO activities, expanding the scope and participation to the extent possible, taking into further consideration, the need to coordinate the involvement of various stake holders to address the different aspects of fusion facilities;

27. Requests the Secretariat to foster regional and international efforts in ensuring wide access to existing multi-purpose research reactors to increase research reactor operations and utilization, through regional research reactors coalitions, ICERRs and formalization of IRRUR missions as an IAEA review service, and further requests the Secretariat to facilitate safe, effective and sustainable operation of these facilities;

28. Urges the Secretariat to continue to assist Member States considering their first research reactor with systematic, comprehensive and appropriately graded infrastructure development and to provide guidelines on the applications of research reactors to help Member State organizations make informed decisions that ensure the strategic viability and enduring sustainability of these projects;

29. Recognizing the underpinning nature of reliable nuclear data for all activities related to nuclear sciences and engineering, expresses its appreciation to the Secretariat for the provision of reliable nuclear data to the Member States for over 50 years as well as the development of an application for accessing nuclear data through mobile phones, and encourages the expansion of such applications to other types of nuclear data to continue the service in future;

30. Requests the Secretariat to assist interested Member States in developing safety infrastructure and in establishing regional training and education centres in their regions, where they do not exist, for the specialized training of nuclear and radiological experts, and requests the Secretariat to take advantage of qualified instructors from developing countries in this regard;

31. Encourages the Secretariat to continue cooperating with the World Nuclear University (WNU) in the biennial School on Radiation Technologies and to enhance its support for the participation of applicants from developing countries;

32. Requests also that the actions of the Secretariat called for in this resolution be undertaken subject to the availability of resources; and

33. Recommends that the Secretariat report to the Board of Governors and to the General Conference at its sixty-seventh (2023) regular session on the progress made in the areas of nuclear science, technology and applications.

2.

Support to the African Union's Pan African Tsetse and Trypanosomosis Eradication Campaign (AU-PATTEC)

The General Conference,

- (a) Recalling its previous resolutions on support to the African Union's Pan African Tsetse and Trypanosomosis Eradication Campaign (AU-PATTEC),
- (b) Recognizing that the main objective of AU-PATTEC is to eradicate tsetse flies and trypanosomosis by creating sustainable tsetse- and trypanosomosis-free areas, using various suppression and eradication techniques, while ensuring that the reclaimed land areas are sustainably and economically exploited and hence contributing to poverty alleviation and food security and thus supporting Member States' efforts to achieve the Sustainable Development Goals,
- (c) Recognizing that tsetse fly and trypanosomosis (T&T) control programmes that include a sterile insect technique (SIT) component are complex and logistically demanding activities that require flexible, innovative and adaptable approaches in the provision of technical support,
- (d) Recognizing that tsetse flies and the trypanosomosis problem which they cause constitute one of the greatest constraints on the African continent's socio-economic development, affecting the health of humans and livestock, limiting sustainable rural development, and thus causing increased poverty and food insecurity,
- (e) Recognizing that although the new reported cases of Human African Trypanosomosis (HAT) are now below 1000 per year and are currently at the lowest level in several decades, animal trypanosomosis still affects millions of livestock every year and remains one of the root causes of hunger and poverty, and hence a constraint to rural development for tens of millions of people in rural communities in 37 African countries, most of which are Agency Member States,
- (f) Recognizing the importance of the development of more efficient livestock production systems in rural communities affected by tsetse flies and trypanosomosis in order to reduce poverty and hunger and to form the basis for food security and socio-economic development,
- (g) Recalling decisions AHG/Dec.156 (XXXVI) and AHG/Dec.169 (XXXVII) of the Heads of State and Government of the then Organization of African Unity (now African Union) to free Africa of tsetse flies and on a plan of action for implementing AU-PATTEC,
- (h) Recognizing the upstream work of the Agency under its Joint FAO/IAEA Programme of Nuclear Techniques in Food and Agriculture in developing the SIT against tsetse flies and providing assistance through field projects, supported from the Agency's Technical Cooperation Fund, on integrating tsetse SIT into Member States' efforts to address the T&T problem in a sustainable manner,
- (i) Cognizant that the SIT is a proven technique for the creation of tsetse-free zones when integrated with other control techniques and when applied within an area-wide integrated pest management (AW-IPM) approach,
- (j) Welcoming the continuing close collaboration of the Secretariat with AU-PATTEC, in consultation with other mandated specialized United Nations organizations, in raising awareness regarding the T&T problem, organizing regional training courses, strengthening regional capacities and providing, through the Agency's Technical Cooperation programme and Regular Budget programme, operational assistance to field project activities, as well as advice regarding

project management and policy and strategy development in support of national and sub-regional AU-PATTEC projects,

(k) Welcoming the progress made by AU-PATTEC in increasingly involving — besides international organizations such as the Agency, the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) — also non-governmental organizations and the private sector in addressing the T&T problem and to foster sustainable agriculture and rural development,

(l) Welcoming the progress made in the Agency-supported tsetse eradication project in the Niayes Region of Senegal, thanks in part to the provision of tsetse pupae by the Insectary of Bobo-Dioulasso (IBD), in Burkina Faso, which has improved food security and increased farmers' incomes in a highly cost-effective way,

(m) Appreciative of the contributions made by various Members States and United Nations specialized agencies in support of addressing the T&T problem in West Africa, especially the contributions made by the United States of America for the last 10 years through the Peaceful Uses Initiative (PUI) in support of projects for T&T control in Senegal,

(n) Acknowledging the continued close collaboration of the Secretariat and the International Centre of Research and Development for Livestock in Subhumid Zones (CIRDES) in Bobo-Dioulasso, Burkina Faso, the first IAEA Collaborating Centre in Africa for the 'Use of the Sterile Insect Technique for Area-Wide Integrated Management of Tsetse Fly Populations',

(o) Acknowledging the close technical collaboration of the Insectarium de Bobo-Dioulasso – Campagne d'Eradication de la Mouche Tsé-Tsé et de la Trypanosomose (IBD-CETT) in Burkina Faso, recently designated as an IAEA Collaborating Centre for the 'Operational programmes against Tsetse flies with a Sterile Insect Technique component' in Africa for the period 2021–2024,

(p) Welcoming the efforts made by the Agency's Department of Technical Cooperation and the Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture in support of AU-PATTEC,

(q) Welcoming the efforts made by the Secretariat to address and eliminate obstacles to applying the SIT against tsetse flies in African Member States through applied research and methods development, both in-house and through the Agency's coordinated research project mechanism,

(r) Acknowledging the need for increasing capacity building on all levels for affected Member States in using advanced nuclear techniques in eradicating the aforementioned-disease, and

(s) Acknowledging the continued support given to AU-PATTEC by the Agency as outlined in the report submitted by the Director General in document GC(66)/9, Annex 2,

1. Urges the Secretariat to further intensify the efforts in advocating at the national, regional and international levels in order to sensitize on the burden imposed by the T&T, and to continue assigning high priority to agricultural development in Member States, and to redouble its efforts to build capacity and further develop the techniques for integrating the SIT with other control methods in creating tsetse-free zones in sub-Saharan Africa;

2. Calls upon Member States to strengthen the provision of technical, financial and material support to African States in their efforts to create tsetse-free zones, while stressing the importance of a needs

driven approach to applied research and methods development and validation to support operational field projects;

3. Requests the Secretariat, in cooperation with Member States and other partners, to maintain funding through the Regular Budget and the Technical Cooperation Fund for consistent assistance to selected operational SIT field projects and to strengthen its support for R&D and technology transfer to African Member States in order to complement their efforts to create and subsequently expand tsetse-free zones;

4. Requests the Secretariat to support Member States through technical cooperation projects on baseline data collection, development of project proposals and implementation of operational tsetse eradication projects underpinned by on-site based experts, with priority given to genetically isolated tsetse populations;

5. Encourages the Agency's Department of Technical Cooperation and the Joint FAO/IAEA Centre to continue supporting and working closely with AU-PATTEC in the agreed areas of collaboration as specified in the Memorandum of Understanding between the African Union Commission and the Agency signed in November 2009 and expanded through the Practical Arrangements (AUC/IAEA) signed in February 2018;

6. Stresses the need for continued harmonized, synergetic efforts by the Agency and other international partners, particularly FAO and WHO, with the aim of supporting the African Union Commission and Member States through the provision of guidance and quality assurance in planning and implementing sound and viable national and sub-regional AU-PATTEC projects;

7. Requests the Agency and other partners to strengthen capacity-building in Member States for informed decision-making regarding the choice of efficient strategies to control T&T and the cost-effective integration of SIT operations in AW-IPM campaigns;

8. Urges the Secretariat and other partners to increase their efforts in providing capacity building and to explore the possibilities of private-public partnership for the establishment and operation of tsetse mass rearing facilities for providing cost-effectively large numbers of sterile male flies to different SIT field programmes;

9. Encourages the countries that have selected a T&T strategy with an SIT component to focus initially on the field activities, including releases of sterile males imported from mass production centres as in the case of the eradication project in Senegal;

10. Encourages the Agency's Department of Technical Cooperation and the Joint FAO/IAEA Centre to continue supporting sub-regional mass production and distribution of sterile tsetse flies through strengthened support to the Insectary of Bobo-Dioulasso; and

11. Requests the Director General to report on the progress made in the implementation of this resolution to the Board of Governors and to the General Conference at its sixty-seventh (2023) regular session.

3.

Renovation of the Agency's Nuclear Applications Laboratories at Seibersdorf

The General Conference,

(a) Recalling paragraph 9 of resolution GC(55)/RES/12.A.1, in which the General Conference called upon the Secretariat to make efforts, together with Member States, to modernize the

Agency's Nuclear Applications (NA) Laboratories at Seibersdorf, thus ensuring maximum benefits to Member States, particularly developing ones,

(b) Further recalling additional resolutions requiring that the NA Laboratories at Seibersdorf be fully fit-for-purpose (such as resolution GC(56)/RES/12.A.2, concerning the development of the sterile insect technique for the eradication and/or suppression of disease-transmitting mosquitoes; resolution GC(57)/RES/12.A.3, concerning support to the African Union's Pan African Tsetse and Trypanosomosis Eradication Campaign (AU-PATTEC); resolution GC(56)/RES/12.A.4, on strengthening the support to Member States in food and agriculture; resolution GC(57)/RES/9.13, regarding nuclear and radiological incident and emergency preparedness and response; and resolution GC(57)/RES/11, relating to the strengthening of the Agency's technical cooperation activities),

(c) Recognizing the growing applications, with economic and environmental benefits, of nuclear and radiation technologies in a wide variety of areas, the vital role that the NA Laboratories at Seibersdorf play in the demonstration and development of new technologies and in their deployment in Member States, and the dramatic increase in associated training courses and provision of technical services during recent years,

(d) Acknowledging with appreciation the worldwide leading role of the NA Laboratories at Seibersdorf in the establishment of global laboratory networks in several areas, such as the animal disease control networks supported through the Peaceful Uses Initiative (PUI), the African Renaissance and International Co-operation Fund (ARF) initiative and numerous other initiatives,

(e) Further recognizing that the four remaining NA Laboratories at Seibersdorf are in need of modernization in order to respond to the evolving range and complexity of the requests submitted to them and the growing demands of Member States and to keep pace with increasingly rapid technological developments,

(f) Emphasizing the importance of fit-for-purpose laboratories that comply with health and safety standards and that have the appropriate infrastructure,

(g) Supporting the Director General's initiative regarding the modernization of the NA Laboratories at Seibersdorf, announced in his statement at the 56th regular session of the General Conference,

(h) Recalling resolution GC(56)/RES/12.A.5, and specifically paragraph 4, in which the General Conference requested the Secretariat "to develop a strategic overarching plan of action for the modernization of the NA Laboratories at Seibersdorf, provide a concept and methodology for the short-, medium- and long-term modernization programme and outline the vision and future role for each of the eight NA laboratories",

(i) Further recalling the report of the Director General to the Board of Governors (GC(57)/INF/11), mapping out activities and services of the NA Laboratories at Seibersdorf aimed at benefiting Member States and other stakeholders, quantifying projected future needs of and demands by Member States and identifying current and anticipated future gaps,

(j) Welcoming the Director General's report to the Board of Governors on the Strategy for the Renovation of the Nuclear Sciences and Applications Laboratories in Seibersdorf as contained in GOV/INF/2014/11, which outlines the necessary elements and resource requirements for assuring fit-for-purpose laboratories, known as the ReNuAL project, to be implemented from 2014–2017 within a €31 million target budget, and the Addendum to the Strategy as contained in GOV/INF/2014/11/Add.1, which provides an update to the Strategy defining the additional

elements as contained in paragraph 15 of the Strategy, known as ReNuAL Plus (ReNuAL+), and the Agency's consideration to establish its own Biosafety Level 3 (BSL3) laboratory capabilities,

(k) Noting GOV/INF/2017/1, "The Renovation of the Nuclear Applications Laboratories Project (ReNuAL)", which provided an update to Member States on progress, resource requirements and the scope of ReNuAL+,

(l) Noting the Director General's technical briefing of September 3, 2020, providing plans for completing the final phase of Seibersdorf Nuclear Applications laboratory modernization, informally called ReNuAL 2, to include: construction of a new laboratory building to house the Nuclear Science and Instrumentation Laboratory, the Plant Breeding and Genetics Laboratory and the Terrestrial Environment Laboratory; refurbishment of the Dosimetry Laboratory; and replacement of the Laboratory greenhouses,

(m) Further welcoming the Director General's report in GC(66)/9, Annex 3, to the Board of Governors on progress made in implementing the ReNuAL project since the 65th General Conference,

(n) Welcoming the achievements and progress made under ReNuAL and ReNuAL+, including the beginning of operations in June 2019 of the Dosimetry Laboratory's new linear accelerator facility and in August 2019 of the new Insect Pest Control Laboratory (IPCL),

(o) Welcoming the opening for operations in June 2020 of the Yukiya Amano Laboratories (YAL), housing the Animal Production and Health Laboratory, the Food and Environmental Protection Laboratory, and the Soil and Water Management and Crop Nutrition Laboratory, and further development of the site infrastructure, which includes an Energy Centre that services the environmental condition needs for both the IPCL and the YAL,

(p) Recognizing the importance of the Agency's BSL3 capabilities to support Member States' efforts to control transboundary animal and zoonotic diseases, and appreciating the good cooperation with Austrian authorities, in particular the Austrian Agency for Health and Food Safety (AGES), which began providing full access and use of its new BSL3 facility at Mödling, thereby enhancing the Agency's ability to provide increased assistance to Member States in controlling transboundary animal and zoonotic diseases, and further noting the Austrian Government's offer of a package of land, infrastructure and technical services that it values at €2 million towards the Agency establishing its own BSL3 capabilities at the same facility in Mödling,

(q) Welcoming that over €39 million in extrabudgetary funds were raised for ReNuAL and ReNuAL+, including over €18.5 million for ReNuAL+, and that seven first-time donors and 21 repeat donors are among Member States that have contributed approximately €19.9 million so far to ReNuAL 2,

(r) Further welcoming the financial and in-kind contributions and cost-free experts for the implementation of the ReNuAL project, which have been provided by 50 Member States to date, including the latest contributions by Ghana, Ireland, Malta, Mexico, Saudi Arabia, Slovakia, Slovenia and the United States of America as well as the contributions received from the Food and Agriculture Organization of the United Nations (FAO) and the African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA), and six private contributors,

(s) Recognizing the efforts of the informal group of Member States known as the 'Friends of ReNuAL' which are actively facilitating the mobilization of resources for the project and

encouraging all Member States that are in a position to do so, to make resources available to support the renovation of the NA Laboratories at Seibersdorf,

(t) Further noting the Agency's Budget Update for 2023 to appropriate an amount of €1.55 million for the capital portion of the Regular Budget expenses of the Agency in 2023 to Major Programme 2 – Capital Project ReNuAL 2,

(u) Taking note of the Director General's call in September 2020 for an additional €14.8 million in extrabudgetary contributions to achieve full funding for construction of the new laboratory building, expected to begin in early 2022,

(v) Welcoming the joint pledge of eight Member States (Australia, Kuwait, Mexico, Nigeria, Qatar, Slovakia, Slovenia and the United States of America) announced at the Board of Governors meeting on 7 March 2022 to provide the remaining €6.7 M in extrabudgetary funding expected on the basis of initial estimates to be required to begin construction on the Flexible Modular Laboratory building in Seibersdorf, Austria, as a demonstration of their commitment to the peaceful uses of nuclear energy,

(w) Acknowledging the efforts and progress made in seeking partnerships and contributions from non-traditional donors, particularly with regard to equipment needs, and further acknowledging with appreciation the establishment of agreements with non-traditional partners for the provision of equipment to the laboratories, and

(x) Noting the Secretariat's 6 September 2022 informal technical briefing to Member States on adjustments to the expected ReNuAL 2 project budget and timeline driven by continuing price escalation and volatility in the construction market and acknowledging its ongoing efforts to hold down costs,

1. Stresses the need, in conformity with its Statute, for the Agency to continue pursuing adaptive research and development activities in the areas of nuclear science, technology and applications where the Agency has a comparative advantage, and to retain its focus on capacity-building initiatives and the provision of technical services so as to meet the basic sustainable development needs of Member States;

2. Requests the Secretariat to strive to ensure that, commensurate with the prominence of the NA Laboratories at Seibersdorf within the Agency, the urgent needs and projected future demands of Member States as regards the services of those laboratories are met in the most cost-effective and sustainable way;

3. Calls on the Secretariat to continue to pursue a project specific resource mobilization strategy seeking resources from Member States, institutions, foundations and the private sector, encourages partnerships including through utilization of the UN Global Marketplace and further encourages the Secretariat to consider devoting financial resources from savings or efficiency gains to the project, in consultation with Member States;

4. Further calls on the Secretariat to continue to develop targeted resource mobilization packages that will match the interest of the potential donors with the needs of the overall ReNuAL initiative, prioritizing the remaining elements to be completed in the final project phase, ReNuAL 2;

5. Encourages the Secretariat to keep Member States apprised of planning related to the remaining requirements of the NA laboratories;

6. Requests the Secretariat to provide information on the financial resources required for upcoming implementation and to indicate where resources are needed to match implementation schedules;

7. Encourages the Secretariat to continue efforts to manage costs in the face of escalating prices and to implement the remaining elements of ReNuAL 2 as expeditiously as practicable;
8. Invites Member States to make financial commitments and contributions, as well as in-kind contributions, in a timely manner, as well as to facilitate cooperation with other partners, as relevant, including institutions, foundations and the private sector, to provide for the enhancement of the core infrastructure of the NA laboratories;
9. Encourages the ‘Friends of ReNuAL’ under the co-chairmanship of South Africa and Germany, and all Member States to continue to support the implementation of the project with a focus on mobilizing resources in a timely manner to allow for implementation of the remaining elements of the project; and
10. Requests the Director General to report on progress made in the implementation of this resolution to the General Conference at its sixty-seventh (2023) session.

4.

Zoonotic Disease Integrated Action (ZODIAC) Project

The General Conference,

- (a) Recalling resolution GC(65)/RES/11.A.4 adopted at its sixty-fifth regular session,
- (b) Taking note of the Director General’s report, as contained in document GC(66)/9 Annex 7 submitted to the Board of Governors,
- (c) Noting the information provided by the Secretariat on ZODIAC including through regional ZODIAC progress meetings and bilateral meetings as well as the launch of the ZODIAC portal in May 2022,
- (d) Appreciating the convening of the 2021 IAEA Scientific Forum, held on the margins of the 65th regular session of the General Conference, which focused on the role of nuclear science in detecting zoonotic diseases, and on the Agency’s support to its Member States in strengthening their preparedness for, and ability to respond in a timely manner to, zoonotic outbreaks,
- (e) Recognizing the role that the Agency continues to play in assisting Member States to achieve the UN’s Sustainable Development Goals (SDGs), including Good Health and Well-being (SDG 3), Life on Land (SDG 15) and Partnerships (SDG 17),
- (f) Appreciating the longstanding role of the Agency, in line with its mandate, in assisting Member States to access nuclear science, technology and applications with the aim of addressing a wide variety of socio-economic human development needs, including in human health, food and agriculture, animal health and zoonotic diseases,
- (g) Recognizing that the Agency has a long-standing practice of cooperation with other relevant international organizations and specialized agencies, and further recognizing the importance of complementing the respective mandates of such organizations, as well as longstanding protocols that guide cooperation such as the Taking a Multisectoral, One-Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries (the Tripartite Zoonoses Guide),
- (h) Taking note of the importance of new partnerships with the Preventing Zoonotic Disease Emergence (PREZODE) initiative and the Institut Pasteur de Dakar,

- (i) Taking note of the establishment of the ZODIAC Ad-Hoc Scientific Panel (ZOSP), which is composed of independent scientists and experts,
- (j) Noting that zoonotic diseases such as COVID-19, including vector-borne diseases such as malaria, yellow fever, chikungunya virus, and dengue fever, have a significant and long-term implications on human health and the socio-economic development of Member States,
- (k) Recognizing the importance of nuclear science, technology and applications to detect, trace and control emerging pathogens that could develop into diseases and pandemics and further recognizing the importance of making these technologies available to all Member States,
- (l) Welcoming that ZODIAC builds upon existing, relevant Agency nuclear science and technology applications and structures, such as the Veterinary Disease Diagnostic Laboratories (VETLAB) Network, and other delivery mechanisms such as Coordination Research Projects and the Technical Cooperation Programme under project INT5157 and that they form part of the Agency's support to Member States in combatting zoonotic diseases and preventing future pandemics,
- (m) Acknowledging that by May 2022 ZODIAC included ZODIAC National Laboratories (ZNLs) in 125 Member States and ZODIAC National Coordinators (ZNCs) nominated by their national authorities in 149 Member States,
- (n) Welcoming the prompt response of the Secretariat in organizing the "ZODIAC Workshop on Monkeypox and Lassa Fever Infections in Animal Reservoirs and the Risks for Public Health Transmission", while leveraging the ZNLs network, following the outbreak of monkeypox on three continents and of Lassa fever in Africa,
- (o) Noting that ZODIAC could support Member States to enhance their preparedness to address emerging and re-emerging zoonotic diseases, through the use of molecular biology nuclear and nuclear-derived methods, by enhancing capacity in Member States to detect, trace and respond to emerging pathogens that could develop into zoonotic diseases and pandemics,
- (p) Recognizing the establishment in cooperation with Food and Agriculture Organization of the United Nations (FAO) in 2013 of the VETLAB Network as an example of the support the Agency provides to Member States, and further recognizing that this network continues to fulfil a crucial role in enabling Member States to fight zoonotic diseases, through building capacity and enabling cross-boundary collaborations, which have significantly improved responses to transboundary animal and zoonotic diseases, as well as the role of the network in enabling the Agency to rapidly respond to the COVID-19 pandemic,
- (q) Recalling the expansion of the Revised Arrangement between the Agency and the FAO in 2021 to include the "improvement of monitoring and controlling of transboundary animal, zoonotic and plant diseases" as a key area, integrating the Joint FAO/IAEA Centre laboratories' capacities into FAO's work on One Health,
- (r) Acknowledging that ZODIAC aims to build on the existing partnership between the Agency and the FAO, to include coordination with the United Nations Environmental Programme (UNEP), the World Health Organization (WHO), and the World Organisation for Animal Health (WOAH),
- (s) Noting the invitation extended by WHO and accepted by the Agency to join Global Strategic Preparedness Network (GSPN) for country health emergency preparedness capacity building which will begin its work in October 2022,

- (t) Appreciating that, as of July 2022, the Secretariat mobilized resources from 14 Member States amounting to €10.4 million received and/or pledged,
- (u) Appreciating that a total of €7.21 million has been allocated to date to capacity building and that, by leveraging information and communication technologies, training courses and workshops implemented under ZODIAC have reached over 1000 participants from 95 Member States, and further appreciating that procurement of critical equipment has been carried out for 25 Member States, while being initiated for another 13 Member States, and
- (v) Recognizing the importance of the Agency's use of the Biosafety Level 3 (BSL3) capabilities provided by the Austrian Government to support Member States' efforts to control transboundary animal and zoonotic diseases, and appreciating the good cooperation with Austrian authorities, in particular the Austrian Agency for Health and Food Safety (AGES) on access to and use of its BSL3 facility,
1. Stresses the need for the Agency, in accordance with its Statute, to respond to the needs and priorities of States and to continue the implementation of all its programmatic activities in a balanced manner and in consultation with Member States;
 2. Further stresses the need for the Agency to continue pursuing adaptive research and development activities in the areas of nuclear science, technology and applications, where the Agency has a comparative advantage, so to support Member States, in particular developing Member States, upon their request, and in conformity with its Statute in building their capabilities to identify, characterize and accurately detect, diagnose, control and manage zoonotic diseases through the use of nuclear and nuclear-derived techniques;
 3. Requests the Secretariat to continue presenting Member States and the Board of Governors with information on ZODIAC, including inter alia on prioritization of tasks in the context of the amount of extrabudgetary resources mobilized, an updated project plan for the implementation of ZODIAC, and the proposed time frame;
 4. Requests the Secretariat to concentrate its efforts on utilizing nuclear and nuclear-derived technologies in relation to ZODIAC, and to ensure equal access to ZODIAC planning and implementation, as well as to training materials and relevant information, including through the ZODIAC portal for all interested Member States;
 5. Further requests the Secretariat to ensure efficiencies and effectiveness, to avoid duplication and to build and expand upon existing Agency delivery mechanisms and networks in its implementation of ZODIAC;
 6. Urges the Secretariat to continue updating ZODIAC's programme design based on the experiences gained and lessons learned from its response to COVID-19 and the outbreaks of other zoonotic diseases;
 7. Takes note of the longstanding collaboration of the Agency with the FAO, the WOA and the WHO, and stresses that coordination, consultation and collaboration with these international organizations with complementary expertise and mandates would be instrumental to avoiding duplication and to the successful development and implementation of ZODIAC;
 8. Calls on the Secretariat to assist Member States to develop sustainable capacity of national laboratories to enable Member States to obtain the necessary nuclear and nuclear-derived tools and capabilities to more effectively respond to emerging zoonotic diseases;

9. Further calls on the Secretariat to expand coordination with relevant international and regional organizations as required without duplicating existing mandates, and to also utilize existing delivery mechanisms, such as the VETLAB Network, collaborating centres and CRPs in strengthening the capacity of Member States in combating zoonotic diseases and preventing pandemics through the use of nuclear and nuclear-derived techniques;
10. Recommends the Secretariat to strengthen its resource mobilization efforts, including by seeking project-specific extrabudgetary funding for the implementation of ZODIAC, in particular building on its previous experience in mobilizing non-traditional and private sector donors;
11. Requests the Secretariat to consult with Member States and relevant international organizations, including through technical meetings, on the principles, procedures and modalities of planning and implementation of ZODIAC, and provide periodic reports to Member States and the Board of Governors on developments; and
12. Requests the Director General to report on the progress made in the implementation of this resolution to the Board of Governors and the General Conference at its sixty-seventh (2023) regular session.

5.

Use of isotope hydrology for water resources management

The General Conference,

- (a) Appreciating the work of the Agency in the area of isotope hydrology in response to resolution GC(63)/RES/10.A.3,
- (b) Taking note of the United Nations International Decade for Action, Water for Sustainable Development, 2018–2028, which focuses on the sustainable development and integrated management of water resources,
- (c) Aware that the United Nations continue to recognize the need for greater and concerted action in the area of water and that water is critical for sustainable development and the eradication of poverty and hunger,
- (d) Recognizing that the Sustainable Development Goals (SDGs) emphasize the need for increased availability of freshwater and expanded capacity-building efforts, which continue to be the primary objectives of the Agency's Water Resources Programme,
- (e) Noting the United Nations 2023 Water Conference being held in New York in March 2023 to accelerate efforts for the achievement of SDG6 "Water and Sanitation for All",
- (f) Noting that to facilitate the completion of SDG6 five 'accelerators' have been identified for SDG6, namely governance, financing, capacity building, data and information, and innovation,
- (g) Aware that a lack of comprehensive mapping of water resources, and groundwater vulnerability and related human capacity, adversely impacts the ability of Member States to increase water availability and use,
- (h) Recognizing that the Agency has continuously demonstrated the importance of isotope techniques for water resources development and management, particularly for groundwater management in arid and semi-arid regions and for improved understanding of the water cycle,

- (i) Noting that initiatives of the Agency, as mentioned in document GC(66)/9, Annex 6, are addressing national priorities and have resulted in a wider use of isotope techniques for water resources and environmental management,
 - (j) Appreciating the fact that the initiatives taken by the Agency, particularly in conjunction with bilateral and other international agencies, including the development of a new series of isotope hydrology outreach materials and the holding of joint training workshops, by the United Nations Commission on Sustainable Development and by the World Water Forum, have significantly raised awareness of the Agency's work on water resources,
 - (k) Appreciating the Agency's efforts in providing easier access for Member States to isotope hydrology analytical facilities through laser-based stable isotope analysers and tritium measurement systems,
 - (l) Recognizing the Agency's efforts in strengthening Member States' capacities for performing standardized and high-quality isotope measurements, including through the development of software for the operation and performance assessment of laboratories engaged in the routine analysis of stable isotopes, noble gases and their isotopes, and tritium in water samples,
 - (m) Noting that, under the pilot phase of the IWAVE (IAEA Water Availability Enhancement) Project, the Agency assisted Member States in increasing the availability and sustainability of freshwater based on comprehensive assessments of national water resources, and welcoming the steps being taken to expand the IWAVE Project to other Member States,
 - (n) Welcoming the announcement of the 16th International Symposium on Isotope Hydrology by the Agency, to be held in Vienna in July 2023,
 - (o) Noting the role of isotope hydrology in assessing the environmental impact of mining,
 - (p) Noting the longstanding relevance and role of the IAEA's Global Network of Isotopes in Precipitation (GNIP) in cooperation with World Meteorological Organization (WMO), which was reaffirmed through the signing of a new memorandum of understanding to manage GNIP, and the Global Network of Isotopes in Rivers (GNIR) used for the assessment of water resources, inter alia through the use of isotope hydrology tools, hydrological mapping, water balance modelling, forecasting the impacts of climate change, drought management and water pollution assessments, and welcoming the increased global coverage of these efforts through enhanced collaboration with Member States, along with renewed collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO), and reinforcing the collaboration with UN Water, and
 - (q) Noting the efforts of the Secretariat to assist Member States to better manage water resources, including its work aimed at improving expertise and collaboration among participating Member States in the use of environmental isotopes to better assess nitrogen pollution and eutrophication of lakes and rivers for optimal water resources management and remediation strategies,
1. Requests the Secretariat, subject to the availability of resources:
- i. to further strengthen efforts to fully exploit the potential of isotope and nuclear techniques for water resources development and management in interested countries through appropriate programmes, by enhancing awareness and assisting Member States in building national capacities through increased collaboration with national and international organizations dealing with water resources management,

- ii. to continue to help Member States obtain easy access to isotopic analysis by upgrading selected laboratories, developing formal network structures between supported laboratories, providing methods and guidance for quality control of isotope data, conducting global as well as region- and country-specific interlaboratory proficiency tests and by assisting Member States in adopting new and less expensive analytical techniques based on recent advances in relevant technologies, including laser-based ones,
- iii. to further strengthen the Isotope Hydrology Laboratory at the Agency's headquarters in Vienna to ensure that it can provide the necessary support and guidance to Member States and support training and technology transfer programmes that assist Member States with water resources management,
- iv. to expand activities related to the IWAVE Project and to groundwater management, particularly the assessment and management of fossil groundwater resources, including in arid and semi-arid areas, as well as to the safety and sustainability of these resources, in collaboration with regional and other international organizations, and to develop tools and methodologies for the improved mapping of water resources,
- v. to provide easier access for Member States to new techniques for the use of noble gas isotopes in determining the full spectrum of groundwater residence time from very young to very old water,
- vi. to provide easier access for Member States to improvements in analysis of tritium in the hydrological cycle in order to understand the connections and transit times between different water reservoirs as well as the risk of contamination and pollution,
- vii. to strengthen activities that contribute to the understanding of climate and its impact on the water cycle and which are aimed at better prediction and mitigation of water-related natural calamities, including extreme droughts and floods, along with improved understanding of how changes in the cryosphere will impact Member State water resources management, and to contribute to the success of the International Decade for Action, Water for Sustainable Development, 2018–2028,
- viii. to expand the use of geochemical and isotope tools to enhance hydrological models in mining areas, including for the assessment of the environmental impact of mining,
- ix. to expand the use of N-15 and other isotopes for water quality studies addressing water quality concerns, analytical requirements to adopt such isotopes and to carry out international intercomparison exercises, to ensure the readiness of laboratories in Member States,
- x. to further strengthen efforts to enhance the temporal and spatial coverage of the Agency's global isotope monitoring programmes for precipitation, rivers and other water bodies as well as related mapping, database and modelling products, through increased collaboration with Member States, particularly in methods and approaches to evaluating a holistic picture of groundwater vulnerability to the combined issues of water quality and water quantity and the projected impacts of climate change on both, and
- xi. to consider participating in high-level international conferences related to water resources management, including the United Nations 2023 Water Conference being held in New York in March 2023 to accelerate efforts for the achievement of SDG6 "Water and Sanitation for All";

2. Requests the Agency to continue, along with other relevant United Nations agencies and with relevant regional agencies, to develop human resources in isotope hydrology through appropriate courses, at universities and institutes in Member States, through the use of advanced communication techniques and educational tools and at regional training centres, designed to provide practicing hydrologists with the ability to use isotope techniques; and
3. Further requests the Director General to report on achievements in implementing this resolution to the Board of Governors and to the General Conference at its sixty-eighth (2024) session under an appropriate agenda item.

6.

Development of the sterile insect technique package for the management of disease-transmitting mosquitoes

The General Conference,

- (a) Recalling its resolution GC(44)/RES/24 on “Servicing Immediate Human Needs” and its resolution GC(62)/RES/9 on “Development of the sterile insect technique package for the management of disease-transmitting mosquitoes”,
- (b) Taking note of the decisions taken by the Summit of the African Union at its Fifteenth Ordinary Session, held in Kampala, Uganda, on 25–27 July 2010, on the five-year review of the Abuja Call for Accelerated Action Towards Universal Access to HIV/AIDS, Tuberculosis and Malaria Services in Africa, reaffirming the commitments undertaken at the Special Summit on HIV/AIDS, TB and Malaria, as well as under the Millennium Development Goals (MDGs) and the Decade for Roll Back Malaria, and deciding to extend the Abuja Call for Accelerated Action Towards Universal Access to HIV/AIDS, Tuberculosis and Malaria Services (the Abuja Call) to 2015 to coincide with attainment of the MDGs,
- (c) Welcoming the adoption of the 2030 Agenda for Sustainable Development, especially the relevant targets under Sustainable Development Goal 3 to ensure healthy lives and promote wellbeing for all, at all ages,
- (d) Appreciating the important role of nuclear applications in addressing human needs,
- (e) Conscious that the work done by the Agency in the field of nuclear sciences and applications in the non power sector contributes to sustainable development, especially with programmes aimed at enhancing the quality of life in various ways, including improving human health,
- (f) Recognizing the success of the area-wide integrated pest management application of the sterile insect technique (SIT) in the eradication and/or suppression of tsetse flies, moths, fruit flies and other insects of economic importance,
- (g) Noting with concern that about 3.98 billion people remain at risk of malaria and that the number of cases and deaths caused by malaria continue to rise worldwide with an estimated 241 million new cases of malaria and 627,000 deaths in 2020, predominantly in Africa, thus constituting a major obstacle to poverty eradication and development in Africa,
- (h) Noting that the malaria parasite has continued to develop resistance to drugs and that mosquitoes have continued to develop resistance to insecticides, and that it is envisaged that the SIT would be used under specific conditions as an adjunct to other technologies, conforming to the World Health Organization’s (WHO’s) roll-back strategy, including integrated vector management, and to not relying on any single approach to malaria management,

- (i) Noting with serious concern that mosquito-transmitted dengue, now the world's most common mosquito-borne disease has become a major international public health concern with an incidence growing more than 30-fold during the last 50 years, that dengue is estimated to infect around 400 million people per year, and over half of the world's population is at risk of the disease, and that insecticide-treated bed nets are not effective in combating dengue as the mosquito vectors are active during the day and other control tactics are urgently required,
 - (j) Noting with concern the effective transmission of mosquito-transmitted chikungunya in the Latin American and the Caribbean regions, and that currently there is no treatment available for this mosquito-borne disease,
 - (k) Noting with concern the Zika virus outbreak in the Americas, which has been strongly linked to babies born with severe neurological disorders, such as congenital microcephaly, and which led to the declaration of a public health emergency of international concern by the WHO on 1 February 2016, and that so far there are no drugs nor effective global vaccines available to treat or prevent Zika,
 - (l) Noting that the Thematic Plan for the Development and Application of the Sterile Insect Technique (SIT) and Related Genetic and Biological Control Methods for Disease Transmitting Mosquitoes, which was revised in October 2019, recommended that the Agency invests in supporting the management of the mosquito vector species through continuous funding of the development of the SIT and other related genetic and environment-friendly methods,
 - (m) Noting that the suppression of disease-transmitting mosquitoes using the SIT will be suitable mostly in urban areas, where aerial spraying with insecticides is prohibited or not indicated, and that an area-wide approach is required, which represents a novel and potentially powerful supplement to existing community-based programmes,
 - (n) Welcoming the fact that laboratory R&D and field project driven research on malaria and other disease-transmitting mosquitoes continued in the last biennium,
 - (o) Welcoming the establishment of a Memorandum of Understanding in July 2019 with WHO to intensify research and development on the use of SIT to fight disease-transmitting mosquito vectors,
 - (p) Appreciating the prioritization of the renovation of the Insect Pest Control Laboratory in Seibersdorf within the ReNuAL Strategy — Strategy for the Renovation of the Nuclear Sciences and Applications Laboratories in Seibersdorf (GOV/INF/2014/11),
 - (q) Noting with appreciation the interest shown by some donors in and their support for R&D and technology transfer on the SIT for combating malaria-, dengue-, Zika- and other disease-transmitting mosquitoes, and
 - (r) Acknowledging with appreciation the support given by the Agency to the development of the SIT for the management of mosquitoes that transmit arthropod borne diseases as outlined in the report by the Director General in document GC(66)/9, Annex 4,
1. Requests the Agency to continue and strengthen, through the activities mentioned above, the research, both in the laboratory and in the field, required to be able to refine and validate the use of the SIT for the integrated management of malaria-, dengue-, Zika- and other disease-transmitting mosquitoes;

2. Requests the Agency to increasingly involve developing Member States' scientific and research institutes in the research programme in order to ensure their participation, leading to ownership by the affected countries;
3. Requests the Agency to increase efforts to continue developing and transferring more efficient sex separation systems, including genetic sexing strains, that allow complete removal of the female mosquitoes in production facilities and to develop cost-effective methods to release and monitor sterile males in the field;
4. Further requests the Agency to allocate adequate resources and to attract extrabudgetary funds so as to continue the recently expanded mosquito research programme, laboratory/office space and staffing;
5. Requests the Agency to continue strengthening capacity building and networking in Latin America, Asia and the Pacific, and Africa through regional TC projects and to continue supporting field projects against *Aedes* and *Anopheles* mosquitoes through national TC projects for assessing the potential of the SIT as an efficient control tactic for disease-transmitting mosquitoes;
6. Invites the Agency to act upon the recommendation made by the experts of the revised Thematic Plan for the Development and Application of the Sterile Insect Technique (SIT) and Related Genetic and Biological Control Methods for Disease Transmitting Mosquitoes to invest in supporting the management of the mosquito vector species through continuous funding of the development of the SIT and related methods;
7. Invites the Agency to continue strengthening its collaboration with the WHO, and to provide guidance to field projects to assess entomological and epidemiological impacts;
8. Supports the Agency's continued efforts to strengthen its cooperation and collaboration with Member States, the Food and Agriculture Organization of the United Nations (FAO) and other relevant partners in the development, application and monitoring of SIT to help ensure sustainable agriculture and food security;
9. Requests the Secretariat to continue to solicit extrabudgetary resources, including through the IAEA Peaceful Uses Initiative, so as to enable increased efforts to be made in validating in the field the SIT package for disease-transmitting mosquitoes through operational projects in the field; and
10. Requests the Director General to report on the progress made in the implementation of this resolution to the General Conference at its sixty-eighth session (2024).

7.

Plan for producing potable water economically using small and medium-sized nuclear reactors

The General Conference,

- (a) Recalling resolution GC(62)/RES/9.A.4, Plan for producing potable water economically using small and medium-sized nuclear reactors, and previous General Conference resolutions on strengthening the Agency's activities related to nuclear science, technology and applications,
- (b) Recognizing that sufficient and clean potable water supplies for all humankind are of vital importance, as emphasized in the United Nations Conference on Sustainable Development (Rio +20), held in June 2012 in Rio de Janeiro, Brazil, and most recently, in Goal 6 of the 2030 Agenda for Sustainable Development, as well as through the discussion towards implementing the Paris Agreement adopted at the COP 21 United Nations Climate Change Conference in December 2015, and the Rabat Call 'Water for Africa' outcome document of the International Conference

on Water and Climate: “Water Security for Climate Justice”, which sought to ensure stronger integration of water in the climate agenda ahead of the COP 22 United Nations Climate Change Conference, which took place in Morocco in November 2016, and other United Nations Climate Change Conferences, i.e. COP23 COP24, COP25 and COP26, related to climate change,

(c) Recognizing the Standing Advisory Group on Nuclear Energy (SAGNE) recommendation VII-3.7 on strengthening the efforts of the Nuclear Energy Department and of the Agency-wide Platform on SMRs and their Applications (IAEA SMR Platform) in the area of non-electric applications of nuclear energy, including supporting Member States in developing plans for producing potable water economically using small and medium or modular reactors (SMRs),

(d) Noting that potable water shortages are of growing concern in many regions of the world, due to population growth, increased urbanization and industrialization and the effects of climate change,

(e) Underlining the urgent need for regional and international cooperation in helping to solve the serious problem of potable water shortages, particularly through the desalination of seawater,

(f) Recognizing that a number of Member States have expressed their interest in participating in activities relating to seawater desalination using nuclear energy,

(g) Noting that seawater desalination using nuclear energy has been successfully demonstrated through various projects in some Member States both for drinking water and for plant operated service water and is generally cost-effective, while recognizing that the economics of implementation will depend on site-specific factors,

(h) Taking note with appreciation of the different activities carried out by the Secretariat in cooperation with interested Member States and international organizations, as outlined in the report of the Director General contained in document GC(66)/9,

(i) Taking note of the enhanced scope of the Technical Working Group on Nuclear Desalination (TWG-ND), to encompass integrated water resources management and more specifically the efficient use of water in nuclear facilities,

(j) Acknowledging with appreciation the launch of the IAEA SMR Platform to ensure a cross departmental approach and to provide consistent and integrated support to Member States on all aspects of their development, deployment and oversight, and noting that the Agency has a dedicated project to support non-electric application of nuclear power,

(k) Noting with appreciation that the Agency is in the position to assist Member States with workshops and expert missions in the area of nuclear desalination, including with SMRs,

(l) Noting that the Agency is organizing a Workshop and an Expert Mission on Nuclear Desalination using SMRs through the Agency’s technical cooperation programme,

(m) Taking note of the technical meetings that were held in 2019, 2020, 2021 and 2022 on topics related to nuclear cogeneration and nuclear desalination, including the Workshop on Non-electric Applications including Desalination in Prague, in February 2019,

(n) Noting that the Agency launched in 2022 a Coordination Research Project (CRP) on assessing the role of nuclear cogeneration (including desalination) within the context of sustainable development, in response to the recommendations of the members of the TWG-ND in 2019 and of follow-on dedicated meetings, and

- (o) Noting that the Secretariat issued in September 2019 the Guidance on Nuclear Energy Cogeneration (IAEA Nuclear Energy Series No. NP-T-1.17) and is developing a publication on vendor and user responsibilities in nuclear cogeneration projects, in response to resolution GC(60)/RES/12/4.4.b to address the request to the Director General to “issue a technical report addressing responsibilities of vendors and users involved in nuclear desalination projects, and assessing different scenarios for cogeneration”,
1. Requests the Director General to continue consultations and strengthen interactions with interested Member States, the competent organizations of the United Nations system, regional development bodies and other relevant intergovernmental and non-governmental organizations in activities relating to seawater desalination using nuclear energy;
 2. Encourages the TWG-ND to continue its functions as a forum for advice and review on nuclear desalination and integrated water resources management activities;
 3. Stresses the need for continued strengthening of international cooperation in the planning and implementation of nuclear desalination demonstration programmes through national and regional projects open for the participation of any interested country;
 4. Requests the Director General, subject to the availability of resources, to:
 - (a) Continue to hold regional training workshops and technical meetings and to use other available mechanisms for disseminating information on nuclear desalination and water management using SMRs and to undertake further activities aimed at better establishing how existing reactors may offer options for nuclear desalination;
 - (b) Issue a revised version of the existing document NG-G-3.1 (Rev.1), Milestones in the Development of a National Infrastructure for Nuclear Power, to address aspects of nuclear cogeneration projects including desalination,
 - (c) Continue to develop the Agency’s activities in assessing the role of nuclear desalination within the context of sustainable development and climate change mitigation,
 - (d) Continue to increase the Agency’s activities related to training, capacity building and disseminating information on nuclear desalination using SMRs;
 5. Invites the Director General to raise funds from extrabudgetary sources in order to catalyse and contribute to the implementation of all Agency activities relating to nuclear desalination and cogeneration, and the development of innovative SMRs;
 6. Requests the Director General to note the high priority given by a growing number of interested Member States to the nuclear desalination of seawater in the process of preparing the Agency’s Programme and Budget; and
 7. Further requests the Director General to report on the progress made in the implementation of this resolution to the Board of Governors and to the General Conference at its sixty-seventh (2023) regular session under an appropriate agenda item.

8.

Strengthening the support to Member States in food and agriculture

The General Conference,

- (a) Recalling its resolutions GC(62)/RES/9.A.5, GC(60)/RES/12.A.5, GC(58)/RES/13.A.5, GC(56)/RES/12.A.4, GC(54)/RES/10.A.4 and GC(52)/RES/12.A.5 on “Strengthening the

support to Member States in food and agriculture” and its resolution GC(51)/RES/14 on “Strengthening the Agency’s activities related to nuclear science, technology and applications”,

(b) Recognizing the central role of agricultural development in accelerating progress towards several Sustainable Development Goals (SDGs), in particular to end hunger, achieve food security and improved nutrition and promote sustainable agriculture for the socioeconomic benefits of all Member States,

(c) Recognizing that the major global trends that will frame agricultural development over the medium term include: rising food demand, lingering food insecurity, malnutrition, epidemics and pandemics caused by zoonotic diseases, and the impact of climate change,

(d) Noting that the Paris Agreement on Climate Change recognizes the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,

(e) Noting that, according to the Food and Agriculture Organization of the United Nations (FAO) publication “The State of Food Security and Nutrition in the World 2022”, up to 828 million people in the world, corresponding to 10.5% of the world population, faced hunger in 2021 and that about the number of people affected by hunger rose by 150 million in the wake of the COVID-19 pandemic,

(f) Noting the benefits from the peaceful application of nuclear techniques in food and agriculture, and the importance of making appropriate technologies available, particularly to developing Member States to improve sustainable and resilient agriculture and food security and, in some cases, to enhance public health and environmental outcomes through One Health approaches,

(g) Appreciating the efforts of the Secretariat to further strengthen its partnership with FAO and to adjust and adapt its technology development, capacity building and technology transfer services in response to Member States’ demands in food and agriculture,

(h) Expressing appreciation for the support of the FAO Council, during its 164th Session in 2020, to upgrade the Joint FAO/IAEA Division to the Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture.

(i) Appreciating the work of the Joint FAO/IAEA Centre in the development and application of nuclear and related techniques in food and agriculture, and welcoming the reaffirmation by the Directors General of the FAO and the Agency of their commitment to expand the long-standing partnership between the two organizations through the signing of revised arrangements regarding the work of the Joint FAO/IAEA Centre in 2021,

(j) Affirming the synergy and contribution of this unique partnership through the Joint FAO/IAEA Centre to global food security and sustainable agriculture development,

(k) Recalling the new Strategic Framework 2022–2031 of the FAO, which seeks to support the 2030 Agenda through more efficient, inclusive, resilient and sustainable agri-food systems and which streamlines priorities, results and resource allocation to accelerate the eradication of hunger, malnutrition, poverty and the sustainable use of natural resources,

(l) Expressing appreciation for the work undertaken by the FAO/IAEA Agriculture and Biotechnology Laboratories in Seibersdorf, including the use of isotopes in climate-smart agriculture and development of innovative techniques for measuring emissions of agricultural greenhouse gases, the provision of food traceability, authenticity and contaminant control, the

research on irradiated animal vaccines for improvement and development of vaccines; the development of radiation hybrid maps for animal breeding; the enhancement of animal disease diagnostic applications; the development of novel testing procedures for the detection and surveillance of SARS-CoV2 in animal populations; and improving the efficiency of mutation induction techniques for crop improvement using modern biotechnologies,

(m) Acknowledging the crucial role of the FAO/IAEA Agriculture and Biotechnology Laboratories in meeting the needs and expectations of Member States relating to the successful deployment of nuclear science, technology and applications in food and agriculture, including to provide a very responsive in-house research and development resource,

(n) Recognizing the importance of the Agency's Biosafety Level 3 (BSL3) capabilities to support Member States' efforts to detect and control transboundary animal and zoonotic diseases, and appreciating the good cooperation with Austrian authorities, in particular the Austrian Agency for Health and Food Safety (AGES) on access to and use of its BSL3 facility, and welcoming the Agency's consideration to establish an IAEA owned extension to the existing facility,

(o) Noting the efforts made by the Secretariat to combat emerging and re-emerging animal and zoonotic diseases such as peste des petits ruminants, swine fever, foot-and-mouth disease, Ebola virus disease, avian influenza, Crimean-Congo haemorrhagic fever, Rift Valley fever, bluetongue and lumpy skin disease in Africa, Asia, Europe, Latin America and the Caribbean, as well as the COVID-19 pandemic and the monkeypox outbreak,

(p) Recognizing that emerging and re-emerging animal diseases are severely affecting livestock productivity and food security, and further recognizing the importance of the development of more efficient and healthy livestock production systems in rural communities in improving socio-economic development,

(q) Recognizing the success of the Veterinary Disease Diagnostic Laboratories Network (VETLAB Network), in adapting its structure to accommodate most transboundary and zoonotic diseases, including COVID-19, and currently involving 46 African Member States plus 19 Asian Member States, as well as recent initiated networks in 17 Latin America and the Caribbean, and 27 European and Central Asian Member States,

(r) Further recognizing the significant and expanding role the VETLAB Network fulfils in assisting these Member States in improving human and animal health as well as food safety and food security and in enhancing the quality of food production thus contributing towards Member States' efforts to achieve the SDGs, and address COVID-19 and other zoonotic diseases through the ZODIAC project.

(s) Further recognizing the increased support for preparedness for and rapid response to animal and zoonotic disease outbreaks, through capacity building in more than 40 Member States including through the VETLAB network.

(t) Noting recent successes resulting from the efforts made by the Secretariat in the development of new, improved and climate smart crop varieties, by using nuclear techniques and biotechnologies,

(u) Commending the Secretariat on the further enhancement of laboratory networks to strengthen capacity building of Member States, in particular for food safety and quality, for crop improvement and molecular marker development, and to strengthen support for the timely diagnosis, control and eradication of transboundary animal and zoonotic diseases,

- (v) Commending the Secretariat on its continued efforts in development and application of nuclear and related analytical techniques to detect agrochemical residues/contaminants and both zoonotic and non-zoonotic pathogens in food, to combat food fraud and to improve food safety and control systems, so as to protect consumers and enhance competitiveness of foodstuffs on the international market,
- (w) Noting the efforts made by the Secretariat to build national and regional capacity in animal genetic characterization targeting especially animal breeding for sustainable development in the context of disease resistance and tolerance to harsh environmental conditions due to climate change,
- (x) Noting the efforts made by the Secretariat in identification and inclusion of lesser known, non-conventional feeds and forages, crop residues and industrial by-products for sustainably increasing animal-origin food production,
- (y) Noting the efforts by the Secretariat to establish a network of national agriculture research systems in the Asia-Pacific region, the Mutation Breeding Network (MBN), to improve the efficiency of crop mutation breeding by encouraging and facilitating the exchange of mutant germplasm for breeding purposes, accelerating mutant trait discovery and marker development for agronomically important traits, and developing molecular markers for mutant traits,
- (z) Noting the efforts made by the Secretariat to introduce coffee mutation breeding as a new approach for genetic improvement of coffee varieties for fighting important diseases such as coffee leaf rust,
- (aa) Commending the Secretariat on its effective assistance to Member States in quickly and effectively identifying and characterizing transboundary animal and zoonotic diseases,
- (bb) Commending the Secretariat on its work on eradication of fruit flies in Latin America and the Caribbean using the Sterile Insect Technique (SIT), resulting in a very significant socio-economic impact in the region and, in particular, on its exemplary support towards the successful eradication of the Mediterranean fruit fly in the Dominican Republic in 2017 and in the State of Colima in Mexico in 2022,
- (cc) Applauding the support provided by the Agency to the African Union's Pan African Tsetse and Trypanosomosis Eradication Campaign (AU-PATTEC), which is making excellent progress in eradicating tsetse flies from the Niayes region of Senegal and is fostering the suppression of tsetse flies and the disease they transmit in several affected Member States,
- (dd) Commending the Secretariat on the support to the development of a harmonized International Guideline on Establishing and Maintaining Pest Free Areas and on the review of postharvest treatment submissions by Member States on food irradiation on the framework of the International Plant Protection Convention (IPPC), to help limit the spread of fruit fly pests, which in turn will help reduce poverty as farmers will have a higher yield, less loss and increased opportunity to trade,
- (ee) Noting the laudable efforts of the Joint FAO/IAEA Centre in developing crop resistance to ravaging diseases and pests, notably the development of Striga resistant sorghum mutant lines and Fusarium wilt resistant mutant lines of banana,
- (ff) Commending the Agency and FAO for the rapid action and initiation of a specific project in Latin America to combat the devastating banana disease TR4 that was reported from the second country in the region in 2021,

- (gg) Commending the Agency and FAO on jointly providing awards to plant breeders and institutes in Member States for exceptional achievements in mutation breeding and their contributions to global food security through 11 Outstanding Achievement Awards, 10 Women in Plant Mutation Breeding Awards, and 7 Young Scientist Awards during the 65th IAEA General Conference in 2021,
- (hh) Commending the Agency on its key role in the post-rinderpest era, including its contributions to the sequestration of the rinderpest virus from diagnostic and vaccine production and storage facilities and to the maintenance of global diagnostic capabilities and expertise, and on its support in building national and regional capacity, improving epidemiological studies and data management and setting up pertinent networks to combat and eliminate other livestock and zoonotic diseases,
- (ii) Commending the Agency on its exemplary role in the enhancement of nuclear emergency response in the field of food and agriculture and on its adaptation of nuclear and related technologies in that connection,
- (jj) Applauding the commencement of new demand-driven R&D work at the FAO/IAEA Agriculture and Biotechnology Laboratories in Seibersdorf on the development of the SIT for disease-transmitting mosquitoes, the use of isotopic techniques in soil erosion control, land and water management, climate-smart agriculture, greenhouse gas emission reduction, food forensics, traceability and contaminant control to improve food safety and quality, the investigation of irradiated animal vaccines, the application of stable isotopes as tracing technologies and in enhancing animal disease diagnostic applications, and the use of whole genome sequencing techniques and bioinformatics in the development of robust molecular markers for mutation breeding,
- (kk) Applauding the support of the Secretariat to 94 African, Asian, European and Latin American countries in the development of soil conservation strategies using fallout radionuclide (FRN) techniques to ensure sustainable agricultural production and to mitigate the impacts of climate change,
- (ll) Welcoming the demand-driven research activities on the development of communication tools to improve decision-making in agricultural water management in Africa, and the new visualization platform for nuclear and radiological emergency preparedness and response for food and agriculture,
- (mm) Recognizing that the demand from Member States for technical assistance in the area of nuclear applications in food and agriculture remains high, as evidenced by the scientific and technical support of the Joint FAO/IAEA Centre to more than for 286 national, regional and interregional technical cooperation projects and 38 coordinated research projects, and
- (nn) Appreciating the contributions made by Member States, the FAO and other stakeholders in support of the ReNuAL+ and ReNuAL 2 Project, including a new fit-for-purpose greenhouse, and, inter alia, the food and agriculture programme of the Agency, and commending the Secretariat on securing extra-budgetary funding of its crucial research including into the development of an SIT package against *Aedes* mosquitoes, and
- (oo) Welcoming the International Symposium on Managing Land and Water for Climate-Smart Agriculture, organized by the Agency in cooperation with FAO in July 2022 in Vienna,
1. Urges the Secretariat to further expand, in an integrated and holistic manner, its efforts to address, inter alia, food insecurity in Member States and to further increase its contribution to raising agricultural

productivity and sustainability, reducing poverty and hunger, and improving farmers' incomes, through the development and integrated application of nuclear science and technology;

2. Encourages the Secretariat, and in particular the Joint FAO/IAEA Centre, to continue its unique role in strengthening the capacity of Member States in the use of nuclear and related techniques to improve food security and sustainable agriculture through international cooperation in research, training and outreach activities;

3. Urges the Secretariat to address the impacts of climate change on food and agriculture through the use of nuclear technologies, with priority on adaptation to and mitigation of the effects of climate change, including through the development of tools and technology packages, and invites the Secretariat to carry out activities for addressing climate change challenges under the thematic heading of 'climate-smart agriculture';

4. Urges the Joint FAO/IAEA Centre to further increase its focus on the sustainable intensification of agricultural productivity through climate-smart agricultural practices that ensure water quality, strengthen food safety and quality, improve water use efficiency, minimize land degradation, maximize crop yield and quality, improve crop resilience, and optimize livestock feeds and other agricultural practices to reduce greenhouse gases, reduce pollution caused by an overload of nutrients, agricultural plastics and antibiotic resistant bacteria and antibiotic resistance genes, while promising better adaptation to and mitigation of climate change in agriculture;

5. Urges the Agency to further increase its focus on development of crops adapted to the negative effect of climate change by using mutation induction techniques with different sources of radiation including electron beam, ion beam, cosmic radiation (as in space breeding), as well as biotechnology and other modern technologies for marker development to assist and accelerate crop breeding;

6. Encourages the Joint FAO/IAEA Centre to assist Member States, upon request, to develop irradiation technologies such as X rays and high-energy electron beam machines to treat plant pathogens and insect pests for sanitary and phytosanitary purposes;

7. Invites the Secretariat, in view of the global trend in antimicrobial resistance (AMR) and its impact on animal and human health, to continue to follow international developments in efforts to establish possible applications where nuclear/isotopic methods/tools may provide comparative advantages;

8. Encourages the Joint FAO/IAEA Centre to further strengthen its pivotal role in the establishment, coordination and support of new global and regional technical/scientific laboratory networks in order to further strengthen regional and global partnerships among institutions in Member State striving to achieve the UN SDGs, and urges the Joint FAO/IAEA Centre to take the lead in establishing, sustaining and managing such networks;

9. Furthermore, encourages the Joint FAO/IAEA Centre to persist in its ongoing endeavours to further strengthen and expand existing networks, including the VETLAB Network, the Latin American and Caribbean Analytical Network (RALACA), the Asia and Oceania Association of Plant Mutagenesis (AOAPM), the African Food Safety Network (AFoSaN), the Food Safety Asia network, the Tephritid Workers Database (TWD) Network, the Mutation Breeding Network (MBN) for the Asia Pacific region, and the Coffee Mutation Network (CMN), with the participation of multiple stakeholders to strengthen national programmes;

10. Further encourages the Joint FAO/IAEA Centre to expand its support to Member States, through the VETLAB Network, in establishing and developing capabilities in identifying, diagnosing, surveillance and monitoring and responding to veterinary and zoonotic diseases, and acknowledges the efficient processes, which lead to quick detection, diagnosis, response and action to diseases that have

the ability to threaten human and animal health as well as food safety, food security and the quality of food production ultimately affecting socio-economic development;

11. Also urges the Joint FAO/IAEA Centre to continue to build on its achievements in this regard by identifying opportunities for expansion to other regions, as requested by Member States and relevant regional organizations;

12. Encourages the Secretariat to continue its work on coffee mutation breeding and to promote development of network of research institutes in coffee growing countries;

13. Requests the Secretariat to strengthen capacity building for Member States, including in addressing those transboundary animal and zoonotic diseases that pose a bio-threat to people and their livelihoods, in case of accidental or deliberate release to the environment, and encourages the Agency, in consultation with Member States, to pursue its consideration of an IAEA owned extension of the existing BSL3 laboratory of the AGES in order to promote and strengthen capacity building for Member States to address these global threats;

14. Encourages the Joint FAO/IAEA Centre, including the FAO/IAEA Agriculture and Biotechnology Laboratories in Seibersdorf, to continue its valuable work in the provision of demand driven training and services and in applied R&D;

15. Requests the Secretariat to work towards the renewal of the FAO/IAEA Agriculture and Biotechnology Laboratories in Seibersdorf, in conjunction with the other programmatic entities of the laboratories of the Department of Nuclear Sciences and Applications, in order to ensure that fit-for purpose laboratories and the controlled-environment modular greenhouses will also in future be optimally positioned to assist Member States' research and development activities;

16. Urges the Secretariat to continue strengthening its activities in the area of food and agriculture through interregional, regional and national capacity building initiatives and through better north-south and south-south collaboration and harmonization, and to further expedite the sustainable transfer of technology to developing Member States;

17. Encourages Member States to contribute, particularly through the Peaceful Uses Initiative, to food and agriculture activities, and to continue supporting these activities by funding projects that will further enhance agricultural productivity while protecting increasingly scarce natural resources and addressing greenhouse gas emissions;

18. Urges the Secretariat to further strengthen its efforts to seek extrabudgetary funding for infrastructure and equipment improvement and modernization of the Seibersdorf Laboratories and fit-for-purpose greenhouses, especially the FAO/IAEA Agriculture and Biotechnology Laboratories, to enable these to meet the growing and continuously evolving needs of Member States, and specifically encourages Member State contributions in support of the ReNuAL 2 initiative;

19. Urges the Secretariat, in its resource mobilization efforts for the ReNuAL 2 project, to draw on the extensive experience of the FAO in mobilizing extrabudgetary resources, and encourages the Secretariat to have relevant FAO staff work closely with Agency staff in these efforts;

20. Encourages the Secretariat to further strengthen its partnership with the FAO and to continue adjusting and adapting its technology development, capacity building and technology transfer services in response to Member States' demands and needs in food and agriculture, especially considering the FAO Strategic Objectives;

21. Appreciates the continuing activities of the Secretariat in relation to nuclear and radiological emergency preparedness and response, especially in the areas of agricultural countermeasures and

remediation strategies to mitigate immediate and longer-term effects arising from radionuclide contamination, and urges the Secretariat to develop technologies, manuals, protocols, decision support systems and guidance to strengthen the capacity of Member States to deal with radionuclide contamination in food and agriculture;

22. Encourages the Joint FAO/IAEA Centre to continue responding to the major global trends framing agricultural development in order to ensure to the maximum extent possible an increased resilience of livelihoods to threats and crises in agriculture, including the adaptation to and mitigation of the effects of climate change;

23. Urges the Secretariat to further strengthen its effort to seek extrabudgetary funding for strengthening its research activities in the preparedness and response to nuclear and radiological emergencies affecting food and agriculture; and

24. Requests the Director General to report on the progress made in the implementation of this resolution to the Board of Governors and the General Conference at its sixty-eighth (2024) regular session.

B.

Nuclear power applications

1.

Introduction

The General Conference,

- (a) Recalling resolution GC(65)/RES/11 and previous General Conference resolutions on strengthening the Agency's activities related to nuclear science, technology and applications,
- (b) Noting the Agency's objectives as outlined in Article II of the Statute include "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world",
- (c) Noting also that the Agency's statutory functions include "to encourage and assist research on, and development and practical application of, atomic energy for peaceful uses", "to foster the exchange of scientific and technical information" and "to encourage the exchange and training of scientists and experts in the field of peaceful uses of atomic energy", and "to make provision, in accordance with this Statute, for materials, services, equipment, and facilities to meet the needs of research on, and development and practical application of, atomic energy for peaceful purposes, including the production of electric power", with due consideration for the needs of developing countries,
- (d) Stressing that the use of nuclear power must be accompanied at all stages by commitments to and ongoing implementation of the highest standards of safety and security throughout the life of the power plants, and effective safeguards, consistent with Member States' national legislation and respective international obligations, and welcoming the Agency's assistance in these areas,
- (e) Recognizing that the establishment of a robust safety, security and non-proliferation infrastructure in States considering introducing nuclear power programmes, as well as maintaining and expanding such programmes, is vital for any nuclear programme, and welcoming the Agency's assistance in these areas,

- (f) Stressing that primary responsibility for nuclear safety and security rests with States, in particular licensees and operating organizations, supervised by regulatory bodies, in order to achieve the protection of the public and environment, and that a strong infrastructure is necessary to execute this responsibility,
- (g) Recalling that launching new, as well as maintaining and expanding existing nuclear power programmes, requires the development, implementation and continuous improvement of appropriate infrastructure to ensure the safe, secure, efficient and sustainable use of nuclear power, and implementation of the highest standards of nuclear safety, taking into account relevant Agency standards and guidance and relevant international instruments, lessons learned from the Fukushima Daiichi accident, as well as a strong and long-term commitment of national authorities to creating and maintaining this infrastructure,
- (h) Welcoming the progress of the IAEA Marie Skłodowska-Curie Fellowship Programme (MSCFP) with the objective to encourage women to pursue a professional career in the field of nuclear sciences, technology and non-proliferation as well as the support offered by various Member States to the MSCFP and acknowledging its successful two years of implementation, resulting in 210 selected students from 93 Member States studying in 53 countries,
- (i) Noting the success of nine Nuclear Energy Management (NEM) Schools and Nuclear Knowledge Management (NKM) Schools conducted in 2021, including the two held annually at the International Centre for Theoretical Physics (ICTP) in Trieste and the highly-valued continuous cooperation between the IAEA and the ICTP,
- (j) Recalling the importance of human resource development, education and training, knowledge management and promotion of gender equality and diversity, stressing the Agency's unique expertise and capacity to assist Member States in building their national capacities to support the safe, secure and efficient use of nuclear power and its application, *inter alia* through its Technical Cooperation Programme, and acknowledging the important role the Agency plays in assisting Member States in the establishment, preservation and enhancement of nuclear knowledge and in implementing effective knowledge management programmes,
- (k) Noting the continued value of Integrated Work Plans (IWPs), which provide an operational framework for the delivery of tailored and optimized Agency assistance, notably through its Technical Cooperation Programme, to support Member States with new and expanding nuclear programmes,
- (l) Noting that significant concerns related to energy resource availability, the environment, energy security, climate change and its impacts, which have been reflected in the Sustainable Development Goals (SDGs) by the Member States of the United Nations in September 2015, suggest that a wide variety of energy options need to be addressed in a holistic manner to promote access to competitive, clean, safe, secure and affordable energy and support sustainable economic growth, and welcoming the proactive approach of the Secretariat to identify relevant areas of activities among the 17 SDGs,
- (m) Conscious of the potential contribution of nuclear power to meet the growing energy needs in the 21st century and mitigating climate change and noting that nuclear power does not produce either air pollution or greenhouse gas emissions during normal operation, which makes it one of the low carbon technologies available to generate electricity, and therefore acknowledging the participation of some Member States in the Nuclear Innovation: Clean Energy Future initiative (NICE Future) under the Clean Energy Ministerial, which calls attention to the interest, on the part of some Member States, in including nuclear power in national and international clean energy and climate discussions and engages nuclear expertise to explore how innovative uses of nuclear

technologies, including systems that integrate nuclear power and renewable sources together in reliable clean energy systems, can accelerate progress toward clean air and climate objectives,

(n) Noting the work of the IAEA on projections on the future use of nuclear power worldwide, in particular with the annual publication Energy, Electricity and Nuclear Power Estimates for the Period up to 2050,

(o) Acknowledging that each State has the right to decide its priorities and establish its national energy policy in accordance with its national requirements, taking into account relevant international obligations, and highlighting the support provided by the IAEA to Member States that are considering developing nuclear power, in the field of energy planning and energy systems assessment taking into account environmental and economic aspects,

(p) Recognizing the challenges in obtaining a large amount of financing to construct nuclear power plants as a viable and sustained option in meeting energy needs, and taking into account appropriate financing schemes, which could involve investors from not only the public sector but also the private sector where it is available,

(q) Taking note of the Nuclear Technology Review 2022 (GC(66)/INF/4), as well as of the report Strengthening the Agency's Activities related to Nuclear Science, Technology and Applications (GOV/2022/30-GC(66)/9) prepared by the Secretariat, and

(r) Noting with appreciation the launch of the Advisory and Peer Review Services Committee (APReSC) established within the Department of Nuclear Energy with the objective to harmonize and improve, as well as monitor, the efficiency and effectiveness of the advisory and peer review services,

1. Commends the Director General and the Secretariat for their work in response to previous relevant General Conference resolutions as reported in document GC(66)/9;
2. Affirms the importance of the role of the Agency in facilitating the development and use of nuclear energy for peaceful purposes, in fostering international cooperation among interested Member States, and in disseminating well-balanced information on nuclear energy to the public;
3. Requests the Director General to keep Member States informed on the progress of the implementation of the MSCFP and encourages Member States in a position to do so, to provide support for the Programme;
4. Encourages the Agency to continue its support to interested Member States in building their national capacities in the operation of nuclear power plants and their nuclear power infrastructure when embarking on new nuclear power programmes;
5. Encourages the Secretariat to support initiatives in the areas of knowledge management, including capacity building activities for senior management and the development of e-learning materials, and to facilitate participation in regional NEM Schools for qualified students, in particular those from developing countries through regional funding or cooperation mechanisms;
6. Encourages the Agency to maintain and strengthen the assistance and peer review and advisory services provided to Member States embarking on a nuclear power programme or expanding such programmes, including the coordination and integration of such services, and calls on those Member States to voluntarily use these services when planning the possible introduction or expansion of a nuclear energy capacity in their national infrastructures and energy mix;
7. Encourages Member States that are considering developing nuclear power to voluntarily use the support provided by the Agency to Member States on energy planning and assessment of energy systems

in relation to environment, climate and economic factors and requests the Agency to continue its services to help interested Member States in this regard;

8. Welcomes the Agency's release of the first Nuclear Energy Series Guide-level publication, Stakeholder Engagement in Nuclear Programmes (IAEA Nuclear Energy Series No. NG-G-5.1), aimed at supporting national efforts to engage stakeholders groups throughout the life cycle of nuclear facilities;

9. Commends the Secretariat's efforts in providing comprehensive information on nuclear energy's potential as a low carbon energy source and its potential to contribute to mitigating climate change, during the COP26 conference in Glasgow, United Kingdom in November 2021, encourages the Secretariat to continue these efforts in its preparations for the upcoming COP27, to be held in November 2022 in Sharm El Sheikh, Egypt, and COP28 to be held in the United Arab Emirates in November 2023, and encourages the Secretariat to work directly with Member States upon request and to continue to extend its activities in these areas, including in the context of the Paris Agreement;

10. Looks forward to the 5th International Ministerial Conference on Nuclear Power in the 21st Century, to be held from 26-28 October 2022, in Washington, DC, the United States of America, and emphasizes the importance of an inclusive approach to participation of all interested Member States;

11. Acknowledges the importance of the Agency's Technical Cooperation projects for assisting Member States in energy analysis and planning, including to develop pathways towards net zero emissions through energy system modelling, and in establishing the infrastructure required for the safe, secure and efficient introduction and use of nuclear power, and encourages interested Member States to consider how they can further contribute in this field by enhancing the Agency's technical assistance to developing countries, and highlights the importance of active and balanced stakeholder engagement in the development or expansion of nuclear power programmes;

12. Encourages the Secretariat to continue to enhance interested Member States' understanding of funding requirements for nuclear power infrastructure and potential approaches to financing nuclear power programmes, including management of radioactive waste and spent fuel, and encourages interested Member States to work with the relevant financial institutions towards addressing financial issues related to the introduction of enhanced safety design and technologies for nuclear power;

13. Encourages the Secretariat to analyse the technical and economic cost drivers for economic sustainability of nuclear power operation, especially with regard to decisions of Member States concerning the long-term operation of nuclear power plants, to determine the value of nuclear power in the energy mix considering environmental conditions and, inter alia, climate objectives;

14. Stresses the importance, when planning, deploying, or decommissioning nuclear energy facilities, including nuclear power plants and related fuel cycle activities, of ensuring the highest standards of safety and emergency preparedness and response, security, non-proliferation, and environmental protection, of being informed of the best available technologies and practices, of continuously exchanging information on R&D addressing safety issues, of strengthening long-term research programmes to learn about severe accidents and related decommissioning activities, and of enabling continuous improvement in this regard, and values the role of the IAEA in fostering exchange of expertise and discussions within the international nuclear community on such issues;

15. Welcomes the continuation of the IAEA Peaceful Uses Initiative and all contributions announced by Member States or regional groups of States, and encourages Member States and groups of States, in a position to do so, to contribute, including with 'in-kind' contributions; and

16. Welcomes the establishment of the Technical Working Group (TWG) on Nuclear Power in Low-Carbon Energy Systems, and encourages the Secretariat to consider establishing a TWG on Nuclear Fuel Cycle Facilities' Operation, which will include ageing and upgrade challenges.

2.

IAEA communication, cooperation with other agencies and stakeholder engagement

The General Conference,

- (a) Recalling the importance of involving the Member States in the drafting and publication process of important publications on nuclear energy,
 - (b) Welcoming the Secretariat's contributions to international discussions addressing global climate change, such as at the Conferences of the Parties to the United Nations Framework Convention on Climate Change (COP), and taking note of the participation of the Agency in the Intergovernmental Panel on Climate Change (IPCC),
 - (c) Commending the proactive approach of the Secretariat to identify relevant areas of activities among the 17 SDGs adopted by the United Nations in 2015,
 - (d) Stressing the importance of appropriate and applicable engineering and industrial national and international codes and standards for the safe, timely and cost-effective deployment of nuclear technology,
 - (e) Acknowledging that it is important for Member States that opt to use nuclear power to engage the public in a science based and transparent dialogue, recognizing the utmost importance of active and balanced stakeholder engagement in Member States that operate nuclear power plants or that are considering and planning for the introduction or expansion of nuclear power, and
 - (f) Noting the Agency's efforts to enhance its work on stakeholder engagement and public information, including the establishment of the Nuclear Energy Stakeholder Engagement Coordination Committee (NESECC) to further enhance the programmatic delivery of the Department of Nuclear Energy in this area, and encouraging the Secretariat to report on the work of this committee,
1. Welcomes efforts of the Secretariat to introduce mechanisms for Member States to participate in the preparation of Nuclear Energy Series publications and the sharing of information on drafts under preparation, and further encourages the Secretariat to continue consolidating the drafting and review of Nuclear Energy Series publications to establish a single, systematic, and transparent process and to report to the Member States on this matter;
 2. Encourages the Secretariat to improve the timeliness of information available during the publication process, welcomes the revision of the Nuclear Energy Series structure, and encourages the Secretariat to continue to develop Nuclear Energy Series documents as a more integrated, comprehensive and clearly organized set of publications to be maintained up-to-date by clearly marking which publications are most current and which have been superseded, in order to enhance accessibility and navigation among these documents;
 3. Welcomes the development of the IAEA website in all official languages of the IAEA and encourages the Secretariat to include more content relevant to policy makers and experts involved in IAEA activities, such as organizational charts and activities of expert groups, and to make access to Agency guidance documents and TECDOCs easier;

4. Encourages the Agency to seek efficiencies in the development and management of digital information systems, to ensure and improve long-term accessibility and public access to these tools and databases, as relevant, and to anticipate the needs to update and maintain these tools on the long term;
5. Requests the Secretariat to continue cooperation with international initiatives such as UN-Energy, and to explore the possibility of cooperation with Sustainable Energy for All (SE4All), stressing the importance of ongoing, transparent communications about the risks and benefits of nuclear power in operating and embarking countries;
6. Requests the Secretariat to continue cooperation with international initiatives such as UN-Energy to ensure that the IAEA's capacity building in energy planning can be widely recognized within UN system as an important contributor to SDGs, in particular SDG 7;
7. Encourages the strengthening of mutual cooperation between Member States by exchanging information on relevant experiences and good practices with respect to nuclear power programmes, through international organizations such as the IAEA, OECD Nuclear Energy Agency (NEA), the International Framework for Nuclear Energy Cooperation (IFNEC), the World Nuclear Association (WNA) and the World Association of Nuclear Operators (WANO);
8. Encourages the Secretariat to work further with the OECD/NEA, in particular, on capacity building issues and in the preparation of key IAEA publications such as the "Status and Trends in Spent Fuel and Radioactive Waste Management" and the next edition of the 'Red Book' on Uranium: Resources, Production and Demand;
9. Encourages the Secretariat to cooperate with national and international industrial organizations for standardization, such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), with regard to their development of appropriate engineering and industry codes and standards in order to better respond to the needs of the Member States;
10. Recommends that the Secretariat continue to explore opportunities for synergy between the Agency's activities (including the International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO)) and those pursued under other international initiatives in areas relating to international cooperation in peaceful uses of nuclear energy, safety, proliferation resistance and security issues and, in particular, supports collaboration among INPRO, the Generation IV International Forum (GIF), IFNEC, the European Sustainable Nuclear Industrial Initiative (ESNII) and the International Thermonuclear Experimental Reactor (ITER) with regard to innovative and advanced nuclear energy systems;
11. Takes note of the Secretariat's cooperation with IFNEC, in areas of nuclear infrastructure, the back end of the nuclear fuel cycle, and sustainable delivery chains, as well as advanced reactors and small and medium or modular reactors (SMRs); and
12. Encourages the Secretariat to continuously assist Member States in enhancing public awareness and understanding of peaceful uses of nuclear energy, including by publishing reports on stakeholder engagement and public information as well as organizing conferences, technical meetings and workshops, among other mechanisms.

3. Nuclear fuel cycle and waste management

The General Conference,

- (a) Noting the increasing number of requests from Member States for advice on the exploration of uranium resources and on mining and milling for safe, secure and effective uranium production while minimizing the environmental impact and acknowledging the importance of the Agency's assistance in this field,
- (b) Noting the importance of identifying undiscovered uranium or secondary uranium resources, while underlining the necessity of safe and effective uranium mine remediation, as part of a sustainable nuclear programme,
- (c) Noting the functioning of the Low Enriched Uranium (LEU) Bank project, in Oskemen, Kazakhstan, with the completion of LEU supply to the bank by France and Kazakhstan,
- (d) Noting also the functioning of the LEU Guaranteed Reserve in Angarsk, Russian Federation, comprising 120 tons of LEU under the aegis of the Agency, and aware of the availability of the American Assured Fuel Supply, a bank of approximately 230 tons of LEU, for responding to supply disruptions in countries pursuing peaceful civilian nuclear programmes,
- (e) Recognizing the role that the effective management of spent fuel and radioactive waste should play in avoiding imposing undue burdens on future generations, and recognizing that, while each Member State should dispose of the radioactive waste it generates, in certain circumstances the safe and efficient management of spent fuel and radioactive waste might be fostered through agreements among Member States to use facilities in one of them for their mutual benefit, and stressing the importance of Agency safety standards on this issue related to the management of radioactive waste and spent fuel and the benefits of strong cooperation with relevant international organizations,
- (f) Emphasizing the need to ensure effective management of spent fuel which, for some Member States, includes reprocessing and recycling, as well as of radioactive waste, including its transport, storage and disposal, in a safe, secure and sustainable manner, and confirming the important role of science and technology in continuously addressing these challenges, particularly through innovations,
- (g) Welcoming progress made in the field of deep geological disposal of spent fuel and high-level radioactive waste, and further recognizing the need for Member States to evaluate and manage the financial commitments that are necessary for planning and implementing radioactive waste and spent fuel management programmes, including disposal,
- (h) Recognizing the continuing efforts and good progress that have been made on the Fukushima Daiichi site, and noting the important and complex decommissioning, environmental remediation and radioactive waste management challenges that remain,
- (i) Recognizing that the growing number of shutdown reactors and an anticipated growing number of shutdown fuel cycle and research facilities increase the need for developing adequate methods and techniques for decommissioning, environmental remediation and managing of all forms of radioactive waste resulting from the decommissioning of facilities, legacy practices and radiological or nuclear accidents and sharing lessons learned in that regard,
- (j) Welcoming ongoing activities of the Agency's project entitled "Global Status of Decommissioning",

- (k) Commending the continuous efforts of the Secretariat to help support the safe, secure and effective borehole disposal of disused sealed radioactive sources, based on expertise from interested Member States, and
- (l) Welcoming the increased use of the Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Radiation (ARTEMIS) peer review missions and encouraging Member States to make further use of these IAEA services,
1. Recognizes the importance of assisting Member States interested in uranium production to improve and maintain safe and sustainable activities through appropriate technology, infrastructure and stakeholder engagement, including Indigenous engagement where Member States deem it appropriate, and the development of skilled human resources;
 2. Encourages the Agency to finalize the publication of the guidance document on a step by step approach for countries considering or initiating a uranium production programme, and encourages interested Member States to use the IAEA review mission in this field, which is based on the analysis and promotion of practical know-how and innovative knowledge regarding environmental aspects of uranium exploration, mining and site remediation;
 3. Welcomes the Secretariat's efforts in pursuing activities for enhancing Member State capabilities in modelling, predicting and improving the understanding of the behaviour of current and advanced nuclear fuel in normal operation and under accident conditions;
 4. Encourages the Secretariat to assist interested Member States in analysing the technical challenges that may hinder the sustainable operation of nuclear fuel cycle facilities, such as ageing management issues;
 5. Encourages the Secretariat to analyse the potential technical challenges that may affect the transportability of spent fuel after long storage;
 6. Encourages the Secretariat to keep Member States informed of the status of the LEU Bank;
 7. Encourages discussion among interested Member States on the development of multilateral approaches to the nuclear fuel cycle, including possible mechanisms for nuclear fuel supply assurance and possible schemes for the back end of the fuel cycle and disposal of radioactive waste, recognizing that any discussion on these matters should take place in a non-discriminatory, inclusive and transparent manner and be respectful of the rights of each Member State to develop national capabilities;
 8. Requests the Secretariat to continue and strengthen its efforts relating to the fuel cycle, spent fuel, and radioactive waste management, and to assist Member States to develop and implement adequate programmes, in accordance with relevant safety standards and security guidance;
 9. Encourages the Secretariat to promote information sharing to better integrate approaches to the back end of the fuel cycle that impact processing, transport, storage, and recycling of spent fuel and radioactive waste management, for example through the coordination of research projects and to provide more information on all stages of radioactive waste management, including waste pre-disposal management and disposal, and thereby assisting Member States, including those embarking on nuclear power programmes, to develop and implement adequate disposal programmes, in accordance with relevant safety standards and security guidance;
 10. Encourages the Secretariat to continue its activities on 'Status and Trends in Spent Fuel and Radioactive Waste Management' by publishing a series of reports on global inventories on radioactive waste and spent fuel and on advanced planning for their management in cooperation with the OECD/NEA and the European Commission;

11. Encourages further strengthening of Agency safety standards as well as strong cooperation with international and regional organizations, such as through the Spent Fuel and Radioactive Waste Information System (SRIS) and the joint reporting tool Spent Fuel and Radioactive Waste Information Tool (SWIFT);
12. Welcomes the organization by the IAEA of the International Conference on Nuclear Decommissioning: Addressing the Past and Ensuring the Future, to be held in May 2023 in Vienna, Austria;
13. Requests the Agency to formulate guidance documents on decommissioning and action plans to support decommissioning, with a view to promoting the safe, secure, efficient, and sustainable execution of these activities, and to facilitate the systematic review of these guidance documents based on recent developments, as appropriate;
14. Encourages the Secretariat to formulate recommendations on practical enablers of end-state definition, controls and long-term stewardship for decommissioning and contaminated sites, including compliance demonstration and stakeholder engagement aspects;
15. Encourages the Agency to further strengthen its activities in the area of environmental remediation, in close collaboration between the Department of Nuclear Energy and the Department of Nuclear Safety and Security;
16. Encourages the Secretariat to further promote the ARTEMIS peer review service, explaining its benefits as a means of encouraging Member States to invite such peer reviews where appropriate, and requests the Secretariat to enhance the effectiveness and efficiency of this service, including combined and back-to-back Integrated Regulatory Review Service (IRRS)-ARTEMIS missions, through cooperation and coordination, between the Department of Nuclear Energy and the Department of Nuclear Safety and Security;
17. Supports Member States in the adoption of best practices for managing naturally occurring radioactive material (NORM) residue/wastes (including inventory determination, reuse, recycle, storage, and disposal options) and to remediate NORM contaminated sites and notes the recommendations of the International Conference on Management of Naturally Occurring Radioactive Materials (NORM) in Industry held in October 2020 in Vienna, Austria; and
18. Encourages the Agency to further strengthen its activities in support of the effective management of disused sealed radioactive sources (DSRS) through, inter alia, the development of Qualified Technical Centres for DSRS management and cooperative efforts to strengthen supporting information on the borehole disposal of DSRS, with a view to enhancing safety and security of DSRS in the long term.

4.

Research reactors

The General Conference,

- (a) Recognizing the role that safe, secure, reliably operated, and well utilized research reactors can play in national, regional, and international nuclear science and technology programmes, including support of R&D in the fields on neutron science, fuel and material testing, and education and training, and
- (b) Commending the Secretariat for the continued support provided for the implementation and promotion of the International Centres based on Research Reactors (ICERR),

1. Requests the Secretariat to continue its efforts, in consultation with interested Member States, to utilize existing research reactors to pursue the Agency's activities in the area of nuclear science and technology, including nuclear power applications, in Member States, with a view to strengthening infrastructure, including safety and security, and fostering science, technology, engineering and capacity building;
2. Encourages the Secretariat to continue to foster regional and international collaboration and networking that expands access to research reactors, such as international user communities;
3. Encourages the Secretariat to inform Member States considering the development or installation of their first research reactor of the issues related to utilization, cost-effectiveness, environmental protection, safety and security, nuclear liability, proliferation resistance, the application of comprehensive safeguards, and radioactive waste management associated with such reactors, and, on request, to assist Member States that are pursuing new reactor projects following the Agency-developed Specific Considerations and Milestones for a Research Reactor Project, including systematic, comprehensive and appropriately graded infrastructure development;
4. Urges the Secretariat to continue to provide guidance on all aspects of the research reactor life cycle, including the development of ageing management programmes at all research reactors, to ensure continuous improvements in safety and reliability, sustainable long-term operation, the sustainability of fuel supply, exploration of efficient and effective disposition options for spent fuel and radioactive waste management, and the development of a knowledgeable customer capability in Member States decommissioning research reactors;
5. Acknowledges the Agency peer review service Integrated Nuclear Infrastructure Review for Research Reactors (INIR-RR), implemented in Thailand, and encourages the Agency to continue to provide this service to interested Member States;
6. Acknowledges the implementation of an Operations and Maintenance Assessment for Research Reactors (OMARR) mission in Chile, and encourages Member States to make further use of this IAEA service;
7. Requests the Secretariat to foster regional and international efforts in ensuring wide access to existing multi-purpose research reactors to increase research reactor operations and utilization, through regional research reactor coalitions and ICERRs;
8. Acknowledges the formalization of Integrated Research Reactor Utilization Review (IRRUR) missions as an IAEA review service aiming at supporting interested Member States to improve the utilization of their research reactors, and requests the Secretariat to provide assistance in facilitating safe, effective and sustainable operation of these facilities;
9. Acknowledges with appreciation the engagement of the Secretariat in the promotion of ICERR, calls on willing Member States to apply for designation, and encourages already designated facilities and expected unique facilities to cooperate through ICERR-Net or other international networks and research programmes on relevant activities of interest to Member States;
10. Acknowledges the expansion of the IAEA Internet Reactor Laboratory project in Asia-Pacific, Europe and Africa regions, and encourages the Secretariat to further strengthen its efforts to support capacity building based on research reactors; and
11. Calls on the Secretariat to continue to support international programmes working to minimize the civilian use of HEU, for example through the development and qualification of LEU high density fuel for research reactors, where such minimization is technically and economically feasible.

5. Operating nuclear power plants

The General Conference,

- (a) Stressing the essential role the Agency plays as an international forum for the exchange of information and experience on nuclear power plant operation and for continuous improvement of this exchange among interested Member States,
 - (b) Recognizing the role that operating nuclear power plants will play, for Member States with nuclear power programmes, in the transition to sustainable energy systems through the supply of reliable, low-emission electricity and heat,
 - (c) Noting the growing importance, for some Member States, of long-term operation of existing nuclear power plants and underlining the need to share relevant lessons learned from long-term operations including safety aspects, for the benefit of new programmes that may have nuclear power plants capable of operating beyond 60 years, and
 - (d) Stressing the importance of adequate human resources for ensuring, inter alia, the safe and secure operation and the effective regulation of a nuclear power programme, and noting the increasing need, worldwide, for trained and qualified personnel to implement nuclear energy related activities during construction, commissioning and operation including long-term operation, performance improvement, effective management of radioactive waste and spent fuel and decommissioning through focusing on the optimization of training programmes for operating organizations,
1. Requests the Secretariat to promote collaboration among interested Member States for strengthening excellence for the safe, secure, efficient, and sustainable operation of nuclear power plants;
 2. Acknowledges the work of the Secretariat on nuclear leadership, management systems, and quality assurance and control for the nuclear industry and the whole life cycle of facilities and activities, including while nuclear power plants are in permanent shutdown, or in transition to decommissioning;
 3. Requests the Secretariat to continue this work through experience sharing and identification and promotion of best practices, and taking into account quality assurance and control activities related to nuclear construction, component manufacturing, and modifications, with respect to fitness for service issues and independent nuclear training accreditation;
 4. Requests the Secretariat to continue its support to interested Member States, in particular through strengthening their knowledge, experience, and capacity in management of ageing and plant life management;
 5. Encourages the Secretariat to support interested Member States in their activities to improve the safe, secure and economical operation of existing nuclear power plants throughout their operational lifetime;
 6. Acknowledges the growing interest in the application of advanced instrumentation and control (I&C) systems and encourages the Agency to provide further support to interested Member States, by means of sharing best practices and strategies used in the justification of commercial industrial I&C equipment for nuclear power plant applications and I&C aspects of human factors engineering as well as for discussing the challenges and issues that need to be resolved in this area;

7. Recognizes the need to enhance the support for grid and nuclear power plant interfaces, grid reliability, and cooling water usage, and recommends that the Secretariat collaborate on these matters with Member States that have operating nuclear power plants;
8. Encourages the Secretariat to share best practices and lessons learned with respect to procurement, supply chain, engineering, and related issues in the delivery of large, capital-intensive nuclear engineering projects, to promote and disseminate them through publications, training courses and web-based tools with respect to supply chain management, and to identify opportunities that may exist to enhance supply chain resilience;
9. Encourages the nuclear owner/operating organizations of Member States to share their experience and knowledge related to methods and strategies for the implementation of post-Fukushima actions at nuclear power plants;
10. Encourages the Secretariat to analyse the status and future challenges of human resources in the nuclear power industry; and
11. Encourages the Secretariat to support interested Member States in their activities to utilize nuclear power plants for non-electrical applications, including gathering and quantifying data, and to identify best practices and lessons learned.

6.

Agency activities in the development of innovative nuclear power technology

The General Conference,

- (a) Recalling its previous resolutions on the Agency's activities in the development of innovative nuclear technology,
- (b) Noting the progress achieved in a number of Member States in the development of innovative nuclear energy system technologies and the high technical and economic potential of international collaboration in the development of such technologies and highlighting the need for transition from the R&D and innovation stage to proven technology stage,
- (c) Acknowledging the importance of fostering increased international collaboration in research on advanced nuclear power technologies and alternative non-electric nuclear energy systems and their applications,
- (d) Welcoming Uzbekistan as a new INPRO member, and noting that the membership of INPRO has reached a total of 44 members comprising 43 IAEA Member States plus the European Commission, and acknowledging that the coordination of INPRO-related activities is achieved through the Agency's Programme and Budget and the INPRO Subprogramme Plan,
- (e) Noting also that the Agency fosters collaboration among interested Member States on selected innovative technologies and approaches to nuclear power through Coordinated Research Projects and INPRO Collaborative Projects,
- (f) Noting that the INPRO Subprogramme Plan identifies activities in areas of global and regional nuclear energy scenarios, innovations in nuclear technology and institutional arrangements and in this area including: the final reports of the INPRO Methodology for Sustainable Assessment of Nuclear Energy Systems for Waste Management and Safety Aspects; collaborative efforts in safeguards by design resulting in new INPRO publications (final reports of the collaborative projects ASENES, ROADMAPS, PROSA and ENV) and a new version of

the Nuclear Energy System Economics Support Tool (NEST) which compares the economics of different technologies for electricity generation,

(g) Noting that the scope of INPRO includes activities to support interested Member States in developing national long-range sustainable nuclear energy strategies and related nuclear energy deployment decision making, including nuclear energy system assessments (NESAs) using INPRO methodology, the INPRO Dialogue Forum, the INPRO School and regional training on nuclear energy system modelling, including collaborative scenarios, and a new INPRO initiative with universities to create a model master's degree programme curriculum on strategic planning for nuclear energy development,

(h) Noting that the INPRO collaborative project on Comparative Evaluation of Nuclear Energy System Options (CENESO) has been completed and the service package "Analysis Support for Enhanced Nuclear Energy Sustainability" (ASENES) has been developed, and welcoming the start of the collaborating projects on the application of ASENES: "Sustainable deployment scenarios for small modular reactors" (ASENES SMR) and "ASENES pilot study on potential of innovative nuclear installations to support multi-recycling of fuel in a nuclear energy system" (STEP FORWARD),

(i) Recognizing that a number of Member States are planning to license, construct and operate prototypes or demonstrations of fast neutron systems, high temperature reactors, and other innovative reactors and integrated systems, noting the latest technology developments in the area of molten salt and molten-salt cooled reactors and encouraging the Secretariat to foster these developments through the provision of international fora for the exchange of information, thus supporting interested Member States to develop innovative technology with enhanced safety, proliferation resistance, and economic performance,

(j) Recognizing that a number of Member States are planning to construct and operate prototypes or demonstrations of thermonuclear fusion reactors, noting the latest developments in fusion technologies and regulatory frameworks, and encouraging the Secretariat to foster these developments through the provision of international fora for the exchange of information, thus supporting interested Member States to develop innovative technology with enhanced safety, and proliferation resistance, and

(k) Welcoming the increased effort of the Secretariat in exploring synergies between fusion and fission technologies, and recognizing the new activities on knowledge transfer to facilitate transition from science activity in the sphere of fusion to industrial scale,

1. Commends the Director General and the Secretariat for their work in response to the relevant General Conference resolutions, in particular the results achieved to date within INPRO;
2. Emphasizes the important role that the Agency can play in assisting interested Member States in building long-term national nuclear energy strategies and in long-term sustainable nuclear energy deployment decision-making through NESAs, based on the INPRO methodology, and nuclear energy scenario analyses and comparative evaluations of nuclear energy system and scenario options based on the approaches and tools developed by INPRO;
3. Encourages the Secretariat to consider further opportunities to develop and coordinate the services it provides on these subjects focusing on transition to sustainable nuclear energy systems using, inter alia, the analytical approaches, tools and services developed by INPRO;
4. Encourages the Secretariat to consider further use of web based tools for implementing the INPRO Collaborative Project: Analytical Framework for Analysis and Assessment of Transition

Scenarios to Sustainable Nuclear Energy Systems, an approach for comparative evaluation of nuclear energy system options based on key indicators and multi-criteria decision analysis methods;

5. Encourages interested Member States to use methods and tools developed by the Agency for nuclear energy evolution scenario modelling, nuclear energy system economic assessments, comparative evaluation of nuclear energy system or scenario options, and road mapping, including ASENES service and its applications;

6. Encourages interested Member States and the Secretariat to apply the ROADMAPS templates for national case studies, including case studies based on cooperation among technology holder and technology user countries, and for national and regional long-term energy planning to enhance sustainability of nuclear energy systems;

7. Requests the Secretariat to promote collaboration among interested Member States in developing innovative, globally sustainable nuclear energy systems and to support the establishment of effective collaboration mechanisms to exchange information on relevant experiences and good practices;

8. Requests the Secretariat to promote further application of multi-criteria decision analysis methods for comparative evaluation of plausible nuclear energy system options by interested INPRO Members states to support decision analysis and prioritization in national nuclear energy programmes;

9. Encourages the Secretariat to study cooperative approaches to the back end of the nuclear fuel cycle with a focus on the drivers and institutional, economic, and legal impediments to ensure effective cooperation among countries towards the long-term sustainable use of nuclear energy and requests the Secretariat to facilitate discussion among developers of advanced reactors (e.g. SMRs, Generation IV reactors) on the challenges and technologies related to decommissioning and radioactive waste and spent fuel management at the earliest stage of their design thinking;

10. Notes the Agency's efforts in developing innovative infrastructure approaches for future nuclear energy systems and invites Member States and the Secretariat to examine the role that technological and institutional innovations can play in improving nuclear power infrastructure and enhancing nuclear safety, security, and non-proliferation and to exchange information, including through the INPRO Dialogue Forum;

11. Invites all interested Member States to join, under the aegis of the Agency, in the activities of INPRO in considering issues of innovative nuclear energy systems and institutional and infrastructure innovations, particularly by continuing assessment studies of such energy systems and their role in national, regional, and global scenarios for the further use of nuclear energy, and also by identifying common topics of interest for possible collaborative projects;

12. Encourages the Secretariat to further its efforts on distance learning/training on development and evaluation of innovative nuclear technology for students and staff of universities and research centres, and to further develop tools supporting this activity that supports efficient delivery of services to Member States;

13. Encourages the Secretariat and interested Member States to complete the revision of the INPRO methodology and to publish its overview, while noting updates to the INPRO manuals dealing with infrastructure, economics, depletion of resources, environmental stressors, radioactive waste management and safety of nuclear reactors and nuclear fuel cycle facilities;

14. Encourages the Secretariat to continue, through activities on innovative nuclear technologies and their underlying science and technology, to exchange knowledge and experience in the area of innovative, globally sustainable nuclear energy systems;

15. Notes the role of research reactors in supporting the development of innovative nuclear energy systems and invites interested Member States to share access to unique research reactors and facilities, currently operated and being constructed, for development of innovative nuclear technologies;
16. Calls upon the Secretariat and Member States in a position to do so to investigate new reactor and fuel cycle technologies with improved utilization of natural resources, and proliferation resistance, including technologies for the recycling of spent fuel and its use in advanced reactors under appropriate controls and for the long-term disposition of remaining waste materials, taking into account economic, safety, and security factors;
17. Recommends that the Secretariat continue to explore, in consultation with interested Member States, innovative nuclear technologies, such as alternative fuel cycles (e.g. thorium, recycled uranium and plutonium), associated back-end management capabilities, and innovative nuclear energy systems including fast neutron systems, supercritical water-cooled, high-temperature gas cooled, molten salt nuclear reactors, as well as continuing to explore thermonuclear fusion experimental reactors, with a view to strengthening and fostering infrastructure, safety, security, science, technology, engineering, and capacity building via the use of experimental facilities and material testing reactors, to facilitate licensing, construction, and operation of these technologies;
18. Acknowledges the outcome of the 28th IAEA Fusion Energy Conference, held virtually in May 2021 in cooperation with France and ITER, highlighting that fusion faces new technology and infrastructure challenges, and looks forward to the 29th IAEA Fusion Energy Conference to be held in London, the United Kingdom, in October 2023,
19. Notes the outcome of the International Conference on Fast Reactors and Related Fuel Cycles: Sustainable Clean Energy for the Future (FR22), held from 19-22 April 2022, and encourages the Secretariat to duly consider its recommendations;
20. Encourages the Secretariat to study the legal and institutional aspects of fusion facilities deployment and to work on identification and development of the basic framework to support the pre-feasibility study of a fusion demonstration plant; and
21. Welcomes the extra budgetary funds provided to the Secretariat's activities for the development of innovative nuclear technology and encourages Member States in a position to do so to consider how they can further contribute to the Secretariat's work in this area.

7.

Approaches to supporting nuclear power infrastructure development

The General Conference,

- (a) Recognizing that the development, implementation, and maintenance of an appropriate infrastructure to support the successful introduction of nuclear power and its safe, secure, and efficient use is an issue of great importance,
- (b) Commending the Secretariat's effort to provide support in the areas of human resource development, which continues to be a high priority to Member States that are considering and planning for the introduction of nuclear power in a safe, secure, and efficient manner,
- (c) Recognizing the continued value of the Agency's Integrated Nuclear Infrastructure Review (INIR) missions, which provide expert and peer-based evaluations, in helping requesting Member States to determine their nuclear infrastructure development status and needs, welcoming the Agency's efforts to share lessons learned from INIR missions and noting the 34 INIR and follow-up INIR missions performed since 2009 at the request of 24 Member States, most recently INIR

Phase 1 missions to Uganda in November/December 2021 and to Sri Lanka in April 2022, and that additional countries considering embarking on or expanding a nuclear power programme are considering requesting INIR missions,

(d) Recognizing the finalization of the evaluation methodology for Phase 3 INIR missions, (IAEA Nuclear Energy Series No. NG-T-3.2 (Rev. 2), preprint 2021), with input from all relevant Departments and taking into account feedback from the first Phase 3 INIR missions, and welcoming that, for each phase of nuclear power programme development, evaluation methodologies and guidelines are now available to support Member States' self-evaluation and to conduct INIR missions,

(e) Noting the importance of coordination of activities, including the integrated and tailored Agency support to Member States for nuclear infrastructure development, through the Nuclear Power Support Group and the Infrastructure Coordination Group,

(f) Noting the increasing number of Technical Cooperation projects, including the provision of assistance to Member States planning to introduce or expand nuclear power generation in conducting energy studies to evaluate future energy options, especially in the scope of their Nationally Determined Contributions (NDCs), taking into account the highest standards of safety and planning for appropriate nuclear security frameworks,

(g) Recognizing the importance of encouraging effective workforce planning for operating and expanding nuclear power programmes, worldwide, and the increasing need for trained personnel,

(h) Taking note of other international initiatives focusing on support for infrastructure development,

(i) Recognizing the importance of effective management systems for new nuclear power programmes and the need to strengthen senior management understanding and execution of their leadership role and responsibilities in this regard, and

(j) Recognizing the growing interest of Member States in the Agency's reactor technology assessment methodology for near term deployment in embarking or expanding countries within the Milestones approach, and noting the increasing number of requests from embarking Member States to receive training to use this tool,

1. Encourages the Nuclear Infrastructure Development Section to pursue its activities integrating the Agency's assistance provided to Member States embarking on or expanding nuclear power programmes;

2. Emphasizes the necessity for Member States to ensure the development of the appropriate legal and regulatory frameworks, which are necessary for the safe introduction of nuclear power;

3. Encourages Member States interested in or embarking on new or expanding nuclear power programmes to make use of the Agency services related to nuclear infrastructure development and to conduct a self-evaluation based on IAEA Nuclear Energy Series No. NG-T-3.2 (Rev. 2) to identify gaps in their national nuclear infrastructure and to invite an INIR mission and other relevant peer review missions, including site and design safety reviews, prior to commissioning the first nuclear power plant, and to make public their INIR and follow-up INIR mission reports in order to promote transparency and to share best practices;

4. Supports the Milestones approach (IAEA Nuclear Energy Series No. NG-G-3.1 (Rev. 1)) as the leading document for use by Member States in the development of new nuclear power programmes and in the establishment of corresponding IWPs, and welcomes the initiation of the revision of the

publication to further incorporate lessons learned, and to include considerations for SMRs and advanced reactors;

5. Requests the Secretariat to continue to incorporate lessons learned from INIR missions and to enhance the effectiveness of such INIR activities, including based on the TECDOC on 10 years of INIR missions (IAEA TECDOC Series No. 1947);

6. Urges Member States to develop and keep updated action plans to address the recommendations and suggestions provided by the INIR missions, encourages them to participate in the development of their Member State-specific IWPs, to implement these IWPs to plan and integrate the IAEA support, to use the Country Nuclear Infrastructure Profiles (CNIPs) as a tool for monitoring and reporting progress, and to make use of INIR follow-up missions for each phase of the programme to assess progress and determine whether recommendations and suggestions were successfully implemented;

7. Encourages the Secretariat to be prepared to perform INIR missions in all UN official languages, to allow the highest level of information exchange during the missions, and to expand the panel of related experts, especially in countries using one of these languages other than English as a working language, while ensuring that the use of such experts does not constitute a conflict of interest or convey commercial advantage;

8. Encourages Member States to use the competency framework and requests the Secretariat to continue to update the nuclear infrastructure bibliography, as useful tools to help Member States plan technical cooperation and other assistance for the development of their national nuclear power programmes such as training needs for capacity building;

9. Invites all Member States that are considering or planning for the introduction or expansion of nuclear power to provide, as appropriate, information and/or resources to enable the Agency to apply its full spectrum of tools in support of nuclear infrastructure development, and encourages the strengthening of activities undertaken by Member States, both individually and collectively, to cooperate on a voluntary basis in nuclear infrastructure development;

10. Encourages the Secretariat to facilitate, where possible, international coordination, including through consultations with Member States that are providing financial support for nuclear infrastructure development activities, to improve efficiency and reduce overlap and duplication of multilateral and bilateral assistance to Member States, provided it avoids all conflicts of interest and excludes areas which are commercially sensitive;

11. Encourages the Agency to review and adapt the evaluation methodology, taking into account the work being coordinated and carried out under the Agency-wide Platform on SMRs and their Applications (IAEA SMR Platform) and the activities being undertaken under the SMR Regulators' Forum and the newly established Nuclear Harmonization and Standardization Initiative (NHSI);

12. Welcomes the extra budgetary funds provided to the Secretariat's activities for infrastructure development support to Member States and encourages Member States, in a position to do so, to consider further contribution to the Secretariat's work in this area;

13. Encourages the Agency to continue to organize workshops on management systems and the leadership roles and responsibilities of senior management in the context of a new nuclear power programme;

14. Encourages the Secretariat to finalize the reactor technology assessment methodology to incorporate the lessons learned in seven years of its application with embarking countries, and to expand the methodology to be relevant to advanced reactor technology, including SMRs, and non-electric applications; and

15. Welcomes the continued development of a gradual comprehensive capacity building programme for embarking countries using introductory e-learning modules, interregional TC training programmes and tailor-made national training events delivered through the IAEA matrix structure and covering all aspects of nuclear power programme development.

8.

Small and medium-sized reactors or small modular reactors — Development and deployment

The General Conference,

- (a) Welcoming the launch of the IAEA SMR Platform to ensure a cross departmental approach and to provide integrated support to Member States on all aspects of their development, deployment and oversight, and noting the launch of the NHSI;
- (b) Recognizing the interregional Technical Cooperation project Supporting Member States' Capacity Building on Small Modular Reactors and Micro-reactors and their Technology and Applications as a Contribution of Nuclear Power to the Mitigation of Climate Change, the Medium Term Strategy for SMRs and the launch of the SMR Coordination and Resource Portal for Information Exchange, Outreach and Networking (SCORPION),
- (c) Noting that the Agency has a dedicated project to support technology development and deployment of SMRs, highlighting their potential as an option for enhancing energy availability and supply security both in expanding and embarking countries and to address economics, environmental protection, safety and security, reliability, proliferation resistance, regulation, technology development, decommissioning, and waste management issues,
- (d) Recognizing the role that SMRs could play in the transition to sustainable energy systems and recognizing that smaller reactors could be better suited to the small electrical grids of many developing countries with less developed infrastructure, and that for some developed countries they could be one way to replace, in line with goals to reduce greenhouse gas emissions, obsolete, ageing, or high-carbon-emitting power sources, but acknowledging that the size of nuclear reactors is a national decision that each Member State takes on the basis of its own needs and the size of its electrical grid,
- (e) Noting that SMRs could play an important role in the future in appropriate markets with cogeneration such as district heating, desalination, and hydrogen production systems, and their potential for innovative integrated energy systems,
- (f) Acknowledging the two ongoing projects on Generic User Requirements and Criteria and Codes and Standards for SMRs, which are aimed at fostering harmonization and standardization at the international level,
- (g) Acknowledging that the Secretariat has published every two years a booklet on Advances in Small Modular Reactor Technology Developments, which represents an international reference document on status of development and deployment of SMRs, as well as various TECDOCs and Nuclear Energy Series reports on SMRs including the Nuclear Energy Series report on Technology Roadmap for SMR Deployment, which provides Member States with a set of generic roadmaps that can be used in the deployment of SMRs,
- (h) Acknowledging that the Secretariat has launched a new Coordinated Research Project on Technologies Enhancing the Competitiveness and Early Deployment of Small Modular Reactors, which will lead to development of methodology, identification of enabling generic technologies and identification of gaps and opportunities,

- (i) Noting the outcomes of the 17th INPRO Dialogue Forum on Opportunities and Challenges in small modular reactors, and
 - (j) Recognizing the role that innovative technologies can play in developing SMRs, noting the ongoing initiative from INPRO of a collaborative project The INPRO Case Study for the Deployment of a Factory Fuelled Small Modular Nuclear Reactor, and noting the launch of NESAs using INPRO methodology for SMR projects,
1. Takes note that there are ongoing projects to construct and deploy SMRs;
 2. Encourages the Secretariat to continue its efforts to facilitate support to Member States in a consistent and coordinated manner, including through the tools and activities developed in the framework of the IAEA SMR Platform, and encourages Member States to use these tools as well as INPRO tools and services for assessment of SMR deployment sustainability;
 3. Requests that the Secretariat ensures coordination between the IAEA SMR Platform and the newly launched NHSI and reports back to Member States in this regard;
 4. Encourages the Secretariat to take into account Member States' expertise on SMR-related issues, and to consider how to best engage Member States across newly created initiatives in this regards;
 5. Encourages the Secretariat to continue taking appropriate measures to assist Member States, particularly embarking countries, engaged in the process of preparatory actions with regard to demonstration projects, and encouraging the development of safe, secure, economically viable SMRs with proliferation resistance and comprehensive strategies for decommissioning and radioactive waste and spent fuel management;
 6. Calls upon the Secretariat to continue to promote effective international exchange of information on options with regard to SMRs available internationally by organizing technical meetings and workshops, as appropriate, and to produce relevant status and technical reports;
 7. Invites the Secretariat and Member States that are in a position to offer SMRs to foster international cooperation in undertaking studies of the social and economic impacts of SMR deployment in developing countries, their potential integration with renewables, and their non-electric applications;
 8. Encourages the Secretariat to continue consultations and interactions with interested Member States, the competent organizations of the United Nations system, financial institutions, regional development bodies, and other relevant organizations regarding advice on the development and deployment of SMRs;
 9. Encourages the Secretariat to continue working on defining indicators of safety performance, operability, maintainability, and constructability so as to assist countries in assessing advanced SMR technologies, and developing guidance for SMR technology implementation;
 10. Encourages the Secretariat to continue providing guidance for technology development and deployment, safety, security, economics, licensing, and regulatory reviews of SMRs of various designs and to foster collaboration among interested Member States working to license and deploy SMRs;
 11. Looks forward to additional reports from the SMR Regulators' Forum;
 12. Encourages the Secretariat to continue developing generic user requirements and criteria as well as codes and standards for SMRs, in the framework of the newly created NHSI and in cooperation with Member States and relevant stakeholders;
 13. Invites the Director General to raise appropriate funding from extra budgetary sources in order to support the activities under the IAEA SMR Platform and to contribute to the implementation of Agency

activities relating to the sharing of experience and lessons learned from the development and deployment of SMRs; and

14. Requests the Director General to continue to report on:
 - i. the activities coordinated and carried out by the IAEA SMR Platform, and progress made on the newly created NHSI, and
 - ii. progress made in the research, development, demonstration and deployment of SMRs in interested Member States intending to introduce them.

9.

Implementation and reporting

The General Conference,

1. Requests that the actions of the Secretariat called for in this resolution be undertaken as a priority subject to the availability of resources; and
2. Requests the Director General to report on progress made in the implementation of this resolution to the Board of Governors as appropriate and to the General Conference at its sixty-seventh (2023) session.

C.

Nuclear knowledge management

The General Conference,

- (a) Recalling its previous resolutions on nuclear knowledge management,
- (b) Noting the importance of establishing and strengthening governance processes to advance knowledge management within organizations and having systems in place to measure the success of knowledge management programmes,
- (c) Emphasizing the increasing importance of the role of the Agency in providing information and good practices in the safe and efficient utilization of nuclear technology for peaceful purposes including information and knowledge for the general public,
- (d) Recognizing that preserving and enhancing nuclear knowledge and ensuring the renewed availability of qualified human resources are vital to the continued safe, economic and secure utilization of all nuclear technologies for peaceful purposes,
- (e) Recognizing that nuclear knowledge management involves both education and training for succession planning as well as the preservation or growth of existing knowledge in nuclear science and technology,
- (f) Aware of the value of diversity and inclusion in fostering innovation and increased performance of the nuclear industry, and, in this regard, of the need to encourage more women to join the nuclear field,
- (g) Noting the important role that the Agency plays in assisting Member States in the establishment, preservation and enhancement of nuclear knowledge and in implementing effective knowledge management programmes at national and organizational levels,

- (h) Recognizing the importance of knowledge management in all areas of the Secretariat's activities and programmes, and the cross-cutting inter-disciplinary and inter-departmental nature of many knowledge management issues and initiatives,
 - (i) Acknowledging the importance of adequate nuclear knowledge in understanding and applying safety principles in the design, construction, licensing, operation, life extension, closure and decommissioning of nuclear facilities,
 - (j) Acknowledging the importance of mitigating risks of knowledge loss for operating facilities and relevant organizations,
 - (k) Aware of the benefits of utilizing nuclear knowledge management approaches to support long-term, safe and secure operation of nuclear facilities, disposal of radioactive waste, decommissioning projects, environmental remediation projects, and the need to improve learning from incidents and events,
 - (l) Noting the increased interest of Member States in the development and use of modern plant information models and guidelines to support nuclear knowledge management, including design knowledge, throughout the entire life cycle of facilities and projects,
 - (m) Acknowledging the utility of collaborations towards development and adoption of integrated national and regional strategic planning approaches to strengthen and make sustainable university nuclear education programmes,
 - (n) Recognizing the benefits of collaboration between the Agency, universities, industry, national laboratories and government institutes, and the role that international and national human resource and knowledge development (HRKD) networks play in facilitating this collaboration,
 - (o) Recognizing the useful role of international coordination and cooperation in facilitating exchanges of information and experience and in implementing actions to help address common problems, and also in benefitting from opportunities relating to education and training and to nuclear knowledge preservation and enhancement,
 - (p) Noting the efforts of the OECD/NEA in maintaining the Nuclear Education, Skills and Technology (NEST) Joint Undertaking, to foster the next generation of nuclear science and technology practitioners, and to establish networks and information sharing among the future workforce in pursuit of concrete research objectives, and the value of the Agency's cooperation with the OECD/NEA in this regard,
 - (q) Noting the success of the programme of NEM Schools and NKM Schools, held via regional schools across Member States and also annually at the ICTP in Trieste, and noting the highly-valued continuous cooperation between the IAEA and the ICTP and Member State institutions in this regard, and
 - (r) Further noting the sustainable outcomes of the regional NEM Schools held since September 2018, and most recently the NEM Schools held in Japan, China and Uzbekistan in 2021 and in Canada, Russia, South Africa and Japan in 2022, and welcoming the continued interest of other Member States in hosting regional NEM Schools,
1. Commends the Director General and the Secretariat for their significant, interdepartmental efforts in addressing issues of preservation and enhancement of nuclear knowledge, in response to relevant General Conference resolutions;

2. Commends the Secretariat for its support to Member States in applying a comprehensive methodology and guidance for managing nuclear knowledge, including through nuclear knowledge management assistance visits and seminars in Member States;
3. Further commends the Secretariat for fostering nuclear knowledge management as a vital component of an integrated management system;
4. Encourages the Director General and the Secretariat to continue to strengthen their current and planned efforts in this area, in a holistic, interdepartmental manner, while consulting and engaging Member States and other relevant international organizations, and to further increase the level of awareness of efforts in managing nuclear knowledge, and in particular:
 - i. Requests the Secretariat to assist Member States, at their request, in their efforts to ensure the sustainability of nuclear education and training in all areas of the peaceful use of nuclear energy, including its regulation, inter alia by taking advantage of, and supporting, the activities of the regional networks in Asia (ANENT), Latin America (LANENT) Africa (AFRA-NEST), and Eastern Europe and Central Asia (STAR-NET) as well as associated educational networks in Europe (ENEN), Canada (UNENE) and the United Kingdom (NTEC);
 - ii. Notes in particular the needs of developing countries or those considering or launching a nuclear power programme and in this regard, encourages Member States in a position to do so to participate in and support networking, and underlines the importance of the Technical Cooperation Programme in that context;
 - iii. Requests the Secretariat, in consultation with Member States, to further develop and disseminate guidance and methodologies for planning, designing, implementing and evaluating nuclear power programmes, including programmes for sustaining nuclear knowledge;
 - iv. Acknowledges with appreciation the publication of the 'NE Useful Terms and Definitions' on the Nuclear Knowledge Management Hub (NKMH) and encourages the Secretariat to continue efforts to harmonize the use of terms and definitions in its publications across the Agency, with an ultimate goal to develop and publish a glossary on nuclear science, technology and applications;
 - v. Requests the Secretariat to continue to make available to Member States training programmes of the NEM School and the NKM School at the ICTP in Trieste, and through regional NEM and NKM Schools;
 - vi. Requests the Secretariat to review the broad range of education and training programmes established by the Department of Nuclear Energy and other departments of the Secretariat, as appropriate, in order to develop the most cost-effective and sustainable combination of events to maximize effectiveness and minimize unnecessary duplication among Agency offerings;
 - vii. Requests the Secretariat to further develop and utilize e-learning material, relevant content and technologies to make nuclear education and knowledge more broadly available in a modern, effective and efficient manner, including collaboration with Member State organizations and the further development and effective use of the IAEA's CLP4NET and CONNECT platforms as e-learning repositories; and
 - viii. Encourages the Secretariat to promote the use of state of the art knowledge management technologies, including those related to the application of modern plant information models and guidelines to support knowledge management, including design knowledge, throughout

the entire life cycle of facilities and projects, and support interested Member States in their further development;

5. Requests the Secretariat to continue to gather, and make available to Member States, nuclear data, information and knowledge resources on the peaceful use of nuclear energy, including the International Nuclear Information System (INIS) and other valuable databases as well as the IAEA Library and the International Nuclear Library Network (INLN);
6. Calls on the Secretariat, to continue to focus, in particular, on activities aimed at helping interested Member States assess their human resource needs and to identify ways to address those needs, inter alia by encouraging the development of new tools and opportunities to gain practical experience through fellowships;
7. Invites the Secretariat, in consultation with Member States, to further develop and disseminate guidance and methodologies for planning, designing, implementing, and evaluating nuclear knowledge management programmes and practices in nuclear operator, regulatory and research organizations;
8. Supports the Agency's continued programme of NEM and NKM Schools, and looks forward to the Fourth International Conference on Nuclear Knowledge Management and Human Resources Development, and requests that the Secretariat continue to develop activities, tools and services in the areas of knowledge management and human resources development in an integrated manner, with a particular focus on capacity building;
9. Requests the Secretariat to promote gender equality and diversity in the context of nuclear knowledge management activities and encourages Member States to establish an inclusive workforce within their nuclear industry, including ensuring equal access to education and training in nuclear knowledge management;
10. Requests the Secretariat to ensure effective coordination among the Agency's Major Programmes, given the cross-cutting, inter-departmental nature of knowledge management issues and activities;
11. Encourages the Secretariat to continue to facilitate the establishment of and maintain effective human resource and knowledge management (HRKM) networks in developing countries, and where appropriate in collaboration with other United Nations organizations and with the support of existing such networks in developed countries;
12. Requests the Director General to take into account the continuing high level of interest of Member States in the range of issues associated with nuclear knowledge management when preparing and carrying out the Agency's programme; and
13. Requests the Director General to report on progress made in the implementation of this resolution to the Board of Governors and to the General Conference at its sixty-eighth (2024) session under an appropriate agenda item.

General Conference

GC(66)/RES/10

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 17 of the agenda

(GC(66)/17)

Strengthening the effectiveness and improving the efficiency of Agency safeguards

Resolution adopted on 30 September 2022 during the eleventh plenary meeting

The General Conference,

- (a) Recalling resolution GC(65)/RES/12,
- (b) Convinced that the Agency's safeguards are a fundamental component of nuclear non-proliferation, promote greater confidence among States, inter alia, by providing assurance that States are complying with their obligations under relevant safeguards agreements, contribute to strengthening their collective security and help to create an environment conducive to nuclear cooperation,
- (c) Considering the Agency's essential and independent role in applying safeguards in accordance with the relevant articles of its Statute, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), nuclear-weapon-free zone treaties and Agency bilateral and multilateral safeguards agreements,
- (d) Noting that nothing should be done to undermine the authority of the Agency in accordance with its Statute,
- (e) Considering also nuclear-weapon-free zones and the positive role that the establishment of such zones, freely arrived at among States of the region concerned, and in accordance with the 1999 Guidelines of the United Nations Disarmament Commission, could play in furthering the application of Agency safeguards in those regions,
- (f) Noting that the 2010 Review Conference of the States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons achieved a substantive outcome in the form of a Final Document, including conclusions and recommendations for follow-on actions applicable to Agency safeguards,
- (g) Taking note of the Agency's Safeguards Statement for 2021,

- (h) Recognizing that the Agency, in a professional and impartial manner, makes every effort to ensure effectiveness, non-discrimination and efficiency in implementing safeguards, which must be in accordance with relevant safeguards agreements,
- (i) Expressing grave concern that attacks or threats of attacks on, against or in the vicinity of nuclear facilities devoted to peaceful purposes can impede the Agency in conducting safeguards activities in accordance with relevant safeguards agreements,
- (j) Recalling the central importance of the comprehensive safeguards agreements for the implementation of the NPT obligations pursuant to its article III, and that 2022 marks the 50th year since the first comprehensive safeguards agreement entered into force,
- (k) Noting that the implementation of comprehensive safeguards agreements should be designed to provide for verification by the Agency of the correctness and completeness of a State's declarations,
- (l) Noting the 30th anniversary, in 2021, of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC),
- (m) Noting that 2022 marks the 65th anniversary of the signature of the Treaty establishing the European Atomic Energy Community (EURATOM),
- (n) Stressing the importance of the Model Additional Protocol approved 25 years ago on 15 May 1997 by the Board of Governors aimed at strengthening the effectiveness and improving the efficiency of Agency safeguards,
- (o) Noting that safeguards agreements are necessary for the Agency to provide assurances about a State's nuclear activities, and that additional protocols are very important instruments for enhancing the Agency's ability to derive safeguards conclusions regarding the absence of undeclared nuclear materials and activities,
- (p) Stressing the importance of the Agency exercising fully its mandate and its authority in accordance with its Statute to provide assurances about the non-diversion of declared nuclear material and the absence of undeclared nuclear material and activities in accordance with respective safeguards agreements and, where relevant, with additional protocols,
- (q) Welcoming the Board's decision, in September 2005, that the Small Quantities Protocol (SQP) should remain part of Agency safeguards, subject to the modifications in the standardized text and the change in the criteria for an SQP referred to in paragraph 2 of document GC(50)/2,
- (r) Noting that decisions adopted by the Board of Governors aimed at further strengthening the effectiveness and improving the efficiency of Agency safeguards should be supported and implemented and that the Agency's capability to detect undeclared nuclear material and activities should be increased within the context of its statutory responsibilities and safeguards agreements,
- (s) Noting that when approving safeguards agreements and additional protocols, the Board of Governors authorizes the Director General to implement safeguards in accordance with the terms of the safeguards agreement or additional protocol concerned,
- (t) Welcoming the work the Agency has undertaken in verifying nuclear material from dismantled nuclear weapons,
- (u) Recalling the IAEA Statute and in particular Article III.B.1, which states that, in carrying out its functions, the Agency shall conduct its activities in accordance with the purposes and principles of the United Nations to promote peace and international cooperation, and in

conformity with policies of the United Nations furthering the establishment of safeguarded worldwide disarmament and in conformity with any international agreements entered into pursuant to such policies,

(v) Recalling that the 2010 NPT Review Conference in Action 30 of the Final Document called for the wider application of safeguards to peaceful nuclear facilities in the nuclear-weapon States, under the relevant voluntary offer safeguards agreements, in the most economic and practical way possible, taking into account the availability of IAEA resources, and stressed that comprehensive safeguards and additional protocols should be universally applied once the complete elimination of nuclear weapons has been achieved,

(w) Recognizing that the Agency's safeguards implementation is continually reviewed and evaluated by the Agency,

(x) Recognizing that effective and efficient safeguards implementation requires a cooperative effort between the Agency and States, and that the Secretariat will continue to engage in open dialogue on safeguards matters with States to maintain and foster transparency and confidence in the implementation of safeguards,

(y) Noting that the Supplementary Document to The Report on the Conceptualization and Development of Safeguards Implementation at the State Level (GOV/2014/41), together with its Corrigenda, is the reference point and is part of the continuing process of consultations,

(z) Stressing that safeguards should remain non-discriminatory and only objective factors should be used to determine safeguards implementation, while political or other extraneous considerations are not included,

(aa) Emphasizing that there is a distinction between the legal obligations of States and voluntary measures aimed at facilitating and strengthening the implementation of safeguards and aimed at confidence building, bearing in mind the obligation of States to cooperate with the Agency to facilitate the implementation of safeguards agreements,

(bb) Noting that bilateral and regional safeguards agreements involving the Agency play an important role in the further promotion of transparency and mutual confidence between States and also provide assurances concerning nuclear non-proliferation,

(cc) Stressing that the strengthening of Agency safeguards should not entail any decrease in the resources available for technical assistance and cooperation and that it should be compatible with the Agency's function of encouraging and assisting the development and practical application of atomic energy for peaceful uses and with adequate technology transfer, and

(dd) Stressing the importance of maintaining and observing fully the principle of confidentiality regarding all information related to the implementation of safeguards in accordance with the Agency's Statute and safeguards agreements,

Consistent with the respective safeguards undertakings of Member States and in order to pursue further efforts to both strengthen the effectiveness and improve the efficiency of Agency safeguards:

1. Calls on all Member States to give their full and continuing support to the Agency in order to ensure that the Agency is able to meet its safeguards responsibilities;
2. Stresses the need for effective safeguards in order to prevent the use of nuclear material for prohibited purposes in contravention of safeguards agreements, and underlines the vital importance of effective and efficient safeguards for facilitating cooperation in the field of peaceful uses of nuclear energy;

3. Urges all Member States to refrain from attacks or threats of attacks on, against or in the vicinity of nuclear facilities devoted to peaceful purposes in order to ensure that the Agency is able to conduct safeguards activities in accordance with relevant safeguards agreements;
4. Emphasizes the obligation of States to cooperate with the Agency in order to facilitate the implementation of safeguards agreements;
5. Stresses the importance of States complying fully with their safeguards obligations;
6. Recognizes the importance of the Agency continuing to implement safeguards in accordance with the rights and obligations under the respective safeguards agreements between States and the Agency;
7. Regrets that not all State parties to the NPT obligated to do so have concluded comprehensive safeguards agreements with the Agency;
8. Bearing in mind the importance of achieving the universal application of Agency safeguards, urges all States which have yet to bring into force comprehensive safeguards agreements to do so as soon as possible;
9. Calls on the Agency to continue to exercise fully its authority in accordance with the Statute in the implementation of safeguards agreements, drawing independent objective conclusions using only impartial and technically based evaluation methods and rigorously reviewed and validated information, including other information to be assessed for accuracy, credibility and safeguards relevance, as described in GOV/2014/41;
10. Underscores the importance of resolving all cases of non-compliance with safeguards obligations in full conformity with the Statute and States' legal obligations, and calls on all States to extend their cooperation in this regard;
11. Bearing in mind the repeated calls and outreach efforts by the Director General and States, calls on all States with original SQPs to either rescind or amend their respective SQPs as soon as their legal and constitutional requirements allow, with a view that States with limited quantities of nuclear material strengthen their safeguards implementation in an adequate manner, and requests the Secretariat to continue to assist States with SQPs, through available resources, in the establishment and maintenance of their State Systems of Accounting for and Control of Nuclear Material (SSACs);
12. Welcomes the fact that, as of 30 September 2022, 75 States have accepted SQPs in accordance with the modified text endorsed by the Board of Governors;
13. Welcomes the fact that, as of 30 September 2022, 156 States and other parties to safeguards agreements have signed additional protocols, and that additional protocols are in force for 141 of those States and other parties;
14. Bearing in mind that it is the sovereign decision of any State to conclude an additional protocol, but once in force, the additional protocol is a legal obligation, encourages all States which have not yet done so to conclude and to bring into force additional protocols as soon as possible and to implement them provisionally pending their entry into force in conformity with their national legislation;
15. Notes that, for States with both a comprehensive safeguards agreement, and an additional protocol in force or being otherwise applied, Agency safeguards can provide increased assurances regarding both the non-diversion of nuclear material placed under safeguards and the absence of undeclared nuclear material and activities for a State as a whole;
16. Notes that, in the case of a State with a comprehensive safeguards agreement supplemented by an additional protocol in force, these measures represent the enhanced verification standard for that State;

17. Recommends that the Agency further facilitate and assist concerned Member States, at their request, in the conclusion and entry into force of comprehensive safeguards agreements, additional protocols and modified SQPs;

18. Notes the commendable efforts of some Member States and the Agency Secretariat in implementing elements of the plan of action outlined in resolution GC(44)/RES/19 and the Agency's updated plan of action (September 2022), and encourages them to continue these efforts, as appropriate and subject to the availability of resources, and review the progress in this regard, and recommends that the other Member States consider implementing elements of that plan of action, as appropriate, with the aim of facilitating the entry into force of comprehensive safeguards agreements and additional protocols, and the amendment of operative SQPs;

19. Reaffirms that the Director General use the Model Additional Protocol as the standard for additional protocols which are to be concluded by States and other parties to comprehensive safeguards agreements with the Agency and which should contain all of the measures in the Model Additional Protocol;

20. Invites the nuclear-weapon States to keep the scope of their additional protocols under review;

21. Notes that the Agency must remain ready to assist, in accordance with its Statute, with verification tasks under nuclear disarmament or arms control agreements that it may be requested to carry out by the States parties to such agreements;

22. Notes that for 2021 the Secretariat has been able to draw the broader safeguards conclusion that all nuclear material remains in peaceful activities and there is no diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared nuclear material and activities for 72 States that have both a comprehensive safeguards agreement and additional protocol in force;

23. Encourages the Agency to continue the implementation of integrated safeguards for those States where both a comprehensive safeguards agreement and additional protocol are in force and the Secretariat has drawn the broader conclusion that all nuclear material remains in peaceful activities;

24. Welcomes the clarifications and additional information provided by the Director General in the Supplementary Document to the Report on The Conceptualization and Development of Safeguards Implementation at the State Level (GOV/2014/41, and its Corrigenda), taken note of by the Board of Governors in September 2014, following the intensive consultation process undertaken over the preceding year;

25. Welcomes the important assurances contained in GOV/2014/41 and its Corrigenda, and in the statements by the Director General and the Secretariat as noted by the Board of Governors in its September 2014 session, including inter alia:

- The State-level concept (SLC) does not, and will not, entail the introduction of any additional rights or obligations on the part of either States or the Agency, nor does it involve any modification in the interpretation of existing rights and obligations;
- The SLC is applicable to all States, but strictly within the scope of each individual State's safeguards agreement(s);
- The SLC is not a substitute for the Additional Protocol and is not designed as a means for the Agency to obtain from a State without an Additional Protocol the information and access provided for in the Additional Protocol;

- The development and implementation of State-level approaches requires close consultation with the State and/or regional authority, particularly in the implementation of in-field safeguards measures;
 - Safeguards-relevant information is only used for the purpose of safeguards implementation pursuant to the safeguards agreement in force with a particular State — and not beyond it;
26. Notes the Secretariat's intention to continue to concentrate its verification effort on the sensitive stages of the nuclear fuel cycle;
27. Notes that the development and implementation of State-level approaches requires close consultation and coordination with the State and/or regional authority, and agreement by the State concerned on practical arrangements for effective implementation of all safeguards measures identified for use in the field if not already in place;
28. Notes that, on the basis of GOV/2014/41 and its Corrigenda, the Secretariat will continue to keep the Board of Governors informed of progress made in the development and implementation of safeguards in the context of the SLC and requests the Director General to report to the Board on progress made in the development and implementation of safeguards in the context of the SLC, including in the annual Safeguards Implementation Report;
29. Welcomes the Secretariat's ongoing open dialogue with States on safeguards matters and its intention to maintain the enhanced dialogue and to issue periodic update reports, as further experience is gained;
30. Notes the statement of the Director General that the focus of the Agency for the immediate future would be on updating existing State-level approaches for States under integrated safeguards and that State-level approaches will be progressively developed and implemented for other States;
31. Notes the Director General's report to the Board of Governors in September 2018 on the experience gained and lessons learned in the implementation of State-level safeguards approaches for States under integrated safeguards and requests the Director General, taking into account questions and issues raised by some Member States, to keep the Board of Governors fully informed through additional timely reports for discussion by Member States as the Secretariat gains further experience with the implementation of State-level safeguards approaches particularly in States with integrated safeguards and also notes that further progressive development and implementation of State-level safeguards approaches for other States would require close coordination and consultation, and should be done without prejudice to bilateral safeguards agreements between States and the Agency, as well as other safeguards agreements with the Agency;
32. Encourages the Secretariat to continue to implement State-level approaches, making every effort to ensure optimal efficiency in the economical use of its resources without compromising effectiveness and with a view to optimizing safeguards implementation for States concerned;
33. Encourages the Agency to enhance its technical capabilities and keep abreast of scientific and technological innovations that hold promising potential for safeguards purposes, and to continue building effective partnerships with Member States in this regard;
34. Takes note of the organization of the 14th IAEA Symposium on International Safeguards to be held from 31 October to 4 November 2022;
35. Welcomes efforts to strengthen safeguards, and in this context takes note of the Secretariat's activities in verifying and analysing information provided by Member States on nuclear supply and

procurement in accordance with the Statute and relevant State safeguards agreements, taking into account the need for efficiency, and invites all States to cooperate with the Agency in this regard;

36. Welcomes continued cooperation between the Secretariat and State and Regional Systems of Accounting for and Control of Nuclear Material (SSAC and RSAC), and encourages them to increase their cooperation, taking into account their respective responsibilities and competencies;

37. Encourages States to maintain and, as appropriate, to continue to strengthen their SSAC or RSAC, recognizing the important role SSACs and RSACs play in safeguards implementation;

38. Recalls the Comprehensive Capacity-Building Initiative for SSACs and SRAs (COMPASS) launched by the Director General in 2020;

39. Encourages States concerned to promote early consultations with the Agency at the appropriate stage on safeguards-relevant aspects for new nuclear facilities in order to facilitate future safeguards implementation;

40. Encourages States to support the Agency's efforts to strengthen the Safeguards Analytical Laboratories and the Network of Analytical Laboratories, especially in developing countries;

41. Welcomes the steps taken by the Director General to protect classified safeguards information as described in document GC(66)/13, and urges the Director General to exercise the highest vigilance in ensuring the proper protection of classified safeguards information, and requests the Director General to continue to review and update the established procedure for the stringent protection of classified safeguards information within the Secretariat and report periodically to the Board about the implementation of the regime for the protection of classified safeguards information;

42. Requests the Director General and the Secretariat to continue to provide objective, technically and factually based reports to the Board of Governors and the General Conference on the implementation of safeguards, with appropriate reference to relevant provisions of safeguards agreements;

43. Requests that any new or expanded actions in this resolution be subject to the availability of resources, without detriment to the Agency's other statutory activities; and

44. Requests the Director General to report on the implementation of this resolution to the General Conference at its sixty-seventh (2023) regular session.

General Conference

GC(66)/RES/11

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 18 of the agenda

(GC(66)/17)

Implementation of the NPT safeguards agreement between the Agency and the Democratic People's Republic of Korea

Resolution adopted on 30 September 2022 during the ninth plenary meeting

The General Conference,

- (a) Recalling previous reports by the Agency's Director General titled *Application of Safeguards in the Democratic People's Republic of Korea* (DPRK) regarding nuclear activities in the DPRK, as well as relevant resolutions of the Agency's Board of Governors and General Conference,
- (b) Recalling with deep concern the steps taken by the DPRK which led the Board of Governors in 1993 to find that the DPRK was in non-compliance with its safeguards agreement and to report the DPRK's non-compliance to the United Nations Security Council,
- (c) Further recalling with gravest concern the nuclear tests by the DPRK on 9 October 2006, on 25 May 2009, on 12 February 2013, on 6 January 2016, on 9 September 2016, and on 3 September 2017, in violation and flagrant disregard of United Nations Security Council resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016), 2321 (2016), 2356 (2017) and 2371 (2017),
- (d) Reiterating the requirements of relevant United Nations Security Council resolutions that the DPRK shall immediately abandon all nuclear weapons and existing nuclear programmes in a complete, verifiable and irreversible manner, and immediately cease all related activities,
- (e) Also recalling the inter-Korean Summits, the Summits between the United States and the DPRK, and the Summits between China and the DPRK and the Summit between Russia and the DPRK of 2018 and 2019, and highlighting the need for relevant parties to fulfil their commitments, including the DPRK's commitment to complete denuclearization of the Korean Peninsula,

- (f) Conscious that a Korean Peninsula free of nuclear weapons would contribute positively to regional and global peace and security,
- (g) Reiterating the international community's firm opposition to the DPRK's possession of nuclear weapons,
- (h) Noting the DPRK's statement in April 2018 concerning a moratorium on nuclear tests and the Acting Director General's report referencing the DPRK's 1 January 2019 announcement that it "would neither make and test nuclear weapons any longer nor use and proliferate them...",
- (i) Expressing grave concern that on 3 September 2017 the DPRK conducted its sixth nuclear test, which it claimed was a "hydrogen bomb for ICBM" and with the 19 January 2022 announcement by the DPRK Political Bureau giving instructions to "restart all temporarily suspended activities" as well as noting the Director General's reports referencing the January 2021 DPRK announcement of developments in its nuclear weapons programme in pursuit of capabilities such as tactical nuclear weapons as well as a 'super-large hydrogen bomb' and the April 2022 DPRK announcement that its nuclear forces "should be strengthened in terms of both quality and scale, so that they can perform nuclear combat capabilities in any situation of warfare",
- (j) Noting with concern the DPRK's announcement on 9 September 2022 of an updated law on nuclear policy specifying conditions for the use of nuclear weapons and further noting that any effort by the DPRK to legitimize its possession of nuclear weapons will never be recognized under the NPT,
- (k) Recognizing the importance of the Six-Party Talks, in particular all the commitments made by the Six Parties in the 19 September 2005 Joint Statement, and on 13 February and 3 October 2007, including the commitment to denuclearization,
- (l) Recalling the important role that the Agency has played in monitoring and verification activities at the Yongbyon nuclear facilities, including as agreed in the Six-Party Talks, in accordance with its mandate,
- (m) Noting with deep concern the DPRK's decision to cease all cooperation with the Agency, and its demand on 14 April 2009 that Agency inspectors leave the DPRK and remove all Agency containment and surveillance equipment from its facilities,
- (n) Noting with growing concern the activities at some of the DPRK's nuclear facilities as indicated in the Director General's report, including deeply troubling indications consistent with the operation of the 5 MW(e) reactor and other facilities, operations and the expansion of the reported centrifuge enrichment facility at Yongbyon, activities at the Kangson complex, and the re-opening of the Punggye-ri nuclear test site, and echoing the Director General's assessments that the DPRK's nuclear activities continue to be a cause of serious concern and that the continuation of the DPRK's nuclear programme is a clear violation of relevant United Nations Security Council resolutions and is deeply regrettable,
- (o) Noting that the Agency remains unable to carry out verification activities in the DPRK, and noting that the Agency's knowledge of developments in the DPRK's nuclear programme is limited,
- (p) Reiterating support for the IAEA's efforts to enhance readiness to play its essential role in monitoring and verifying the DPRK's nuclear programme, in accordance with its mandate, stressing the importance of a complete understanding of that programme through the collection and evaluation of safeguards relevant information, welcoming in this regard continued intense

efforts by the Secretariat to monitor the DPRK's nuclear programme, and welcoming the report by the Director General that once a political agreement has been reached among the countries concerned, the Agency is ready to return to the DPRK in a timely manner, if requested to do so by the DPRK and subject to approval by the Board of Governors, and

(q) Having considered the Director General's report contained in document GC(66)/16,

1. Condemns again in the strongest terms the six nuclear tests conducted by the DPRK in violation and flagrant disregard of the relevant United Nations Security Council resolutions;
2. Calls upon the DPRK to refrain from conducting any further nuclear tests, pursuant to the relevant United Nations Security Council resolutions;
3. Strongly deplores all the DPRK's ongoing nuclear activities, as outlined in the Director General's report, and urges the DPRK to halt all such activities and any efforts to readjust or expand its nuclear facilities aimed at the production of fissile material, including enrichment and reprocessing activities;
4. Deplores the DPRK's actions to cease all cooperation with the Agency, strongly endorses actions taken by the Board of Governors, and commends the impartial efforts of the Director General and the Secretariat to apply comprehensive safeguards in the DPRK;
5. Reiterates the importance of sustainable peace and security on the Korean Peninsula and in north-east Asia at large, and to this end, stresses the importance of creating favourable conditions for a diplomatic and peaceful solution in support of the complete denuclearization of the Korean Peninsula;
6. Reaffirms the importance of the Six-Party Talks, the agreements reached, and the full implementation of the 19 September 2005 Joint Statement of the Six-Party Talks aimed at achieving substantive progress towards verifiable denuclearization of the Korean Peninsula;
7. Stresses the importance of working to reduce tensions on the Korean Peninsula, supports efforts at diplomatic engagement and building trust with the DPRK, and urges the DPRK to return to dialogue as well as relevant parties to implement fully previous commitments, including commitments by the DPRK to work toward complete denuclearization of the Korean Peninsula;
8. Strongly urges the DPRK to fully comply with all its obligations under United Nations Security Council resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016), 2321 (2016), 2356 (2017), 2371 (2017), 2375 (2017), 2397 (2017), and other relevant resolutions, and to take concrete steps towards abandoning all its nuclear weapons and existing nuclear programmes in a complete, verifiable and irreversible manner, and immediately cease all related activities;
9. Stresses the importance of all Member States implementing their obligations pursuant to relevant United Nations Security Council resolutions fully, comprehensively, and immediately, including, inter alia, the United Nations Security Council's affirmation that it will keep the DPRK's actions under continuous review and is prepared to strengthen, modify, suspend or lift the measures as may be needed in light of the DPRK's compliance, and, in this regard, expresses its determination to take further significant measures in the event of a further DPRK nuclear test or launch;
10. Reaffirms that the DPRK cannot have the status of a nuclear-weapon State in accordance with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), as stated in United Nations Security Council resolutions 1718 (2006) and 1874 (2009), and in the Final Document of the 2010 Review Conference of the Parties to the NPT;
11. Calls upon the DPRK to come into full compliance with the NPT and to cooperate promptly with the Agency in the full and effective implementation of Agency comprehensive safeguards, including all necessary safeguards activities provided for in the safeguards agreement, which the Agency has not been

able to conduct since 1994, and to resolve any outstanding issues that may have arisen due to the long absence of Agency safeguards and the lack of Agency access since April 2009;

12. Strongly supports the Secretariat's continued enhanced readiness to play its essential role, within the framework of a political solution to be reached by the countries concerned, and subject to a corresponding mandate by the Board of Governors, in verifying the DPRK's nuclear programme, and encourages the Director General to continue to provide the Board with relevant information about these new arrangements;

13. Supports and encourages the international community's peaceful and diplomatic efforts and initiatives in all available and appropriate forums including confidence building measures to reduce tensions, and achieve sustainable peace and security on the Korean Peninsula;

14. Requests the Secretariat continue to make this resolution available to all interested parties; and

15. Decides to remain seized of the matter and to include the item "Implementation of the NPT safeguards agreement between the Agency and the Democratic People's Republic of Korea" in the agenda for its sixty-seventh (2023) regular session.

General Conference

GC(66)/RES/12

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 19 of the agenda

(GC(66)/17)

Application of IAEA safeguards in the Middle East

Resolution adopted on 29 September 2022 during the eighth plenary meeting

The General Conference,¹

- (a) Recognizing the importance of the non-proliferation of nuclear weapons — both globally and regionally — in enhancing international peace and security,
 - (b) Mindful of the usefulness of the Agency's safeguards system as a reliable means of verification of the peaceful uses of nuclear energy,
 - (c) Concerned by the grave consequences, endangering peace and security, of the presence in the Middle East region of nuclear activities not wholly devoted to peaceful purposes,
 - (d) Welcoming the initiatives regarding the establishment of a zone free of all weapons of mass destruction, including nuclear weapons, in the Middle East and earlier initiatives regarding arms control in the region,
 - (e) Recognizing that full realization of these objectives would be promoted by the participation of all States of the region,
 - (f) Commending the efforts of the Agency concerning the application of safeguards in the Middle East and the positive response of most States in concluding a full-scope safeguards agreement, and
 - (g) Recalling its resolution GC(65)/RES/14,
1. Takes note of the Director General's report in document GC(66)/12;

¹ The resolution was adopted with 117 in favour, 0 against and 7 abstentions (roll-call vote).

2. Calls upon all States in the region to accede to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT);²
3. Calls upon all States in the region, to accede to and implement, all relevant nuclear disarmament and non-proliferation conventions, to fulfil in good faith international obligations and commitments relating to safeguards, and to cooperate fully with the IAEA within the framework of their respective obligations;
4. Affirms the urgent need for all States in the Middle East to forthwith accept the application of full-scope Agency safeguards to all their nuclear activities as an important confidence-building measure among all States in the region and as a step in enhancing peace and security in the context of the establishment of a NWFZ;
5. Calls upon all parties directly concerned to consider seriously taking the practical and appropriate steps required for the implementation of the proposal to establish a mutually and effectively verifiable NWFZ in the region, and invites the countries concerned which have not yet done so to adhere to international non-proliferation regimes, including the Treaty on the Non- Proliferation of Nuclear Weapons, as a means of complementing participation in a zone free of all weapons of mass destruction in the Middle East and of strengthening peace and security in the region;
6. Further calls upon all States of the region, pending the establishment of the zone, not to pursue actions that would undermine the goal of establishing the zone, including developing, producing, testing or otherwise acquiring nuclear weapons;
7. Further calls upon all States in the region to take measures, including confidence-building and verification measures, aimed at establishing a NWFZ in the Middle East;
8. Urges all States to render assistance in the establishment of the zone and at the same time to refrain from any action that would hinder efforts aiming at its establishment;
9. Mindful of the importance of establishing the Middle East as a nuclear weapons free zone, and in this context, emphasizing the importance of establishing peace therein;
10. Requests the Director General to pursue further consultations with the States of the Middle East to facilitate the early application of full-scope Agency safeguards to all nuclear activities in the region as relevant to the preparation of model agreements, as a necessary step towards the establishment of a NWFZ in the region, referred to in resolution GC(XXXVII)/RES/627;
11. Calls upon all States in the region to extend their fullest cooperation to the Director General in the fulfilment of the tasks entrusted to him in the preceding paragraph;
12. Calls upon all other States, especially those with a special responsibility for the maintenance of international peace and security, to render all assistance to the Director General by facilitating the implementation of this resolution; and
13. Requests the Director General to submit to the Board of Governors and the General Conference at its sixty-seventh (2023) regular session a report on the implementation of this resolution and to include in the provisional agenda for that session an item entitled “Application of IAEA safeguards in the Middle East.

² Operative paragraph 2 was voted on separately and was adopted with 115 in favour, 1 against and 9 abstentions (roll-call vote).

General Conference

GC(66)/RES/13

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 25 of the agenda

(GC(66)/17)

Examination of delegates' credentials

**Resolution adopted on 26 September 2022 during the second
plenary meeting**

The General Conference,

Accepts the report by the General Committee on its examination of the credentials of Myanmar to the Conference's sixty-sixth regular session, which is set forth in document GC(66)18.

General Conference

GC(66)/RES/14

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 25 of the agenda
(GC(66)/17)

Examination of Delegates' Credentials

**Resolution adopted on 29 September 2022 during the seventh plenary
meeting**

The General Conference,

Accepts the report by the General Committee on its examination of the credentials of delegates to the Conference's sixty-sixth regular session, which is set forth in document GC(66)23.

General Conference

GC(66)/DEC/10

Date: September 2022

General Distribution

Original: English

Sixty-sixth regular session

Item 11 of the agenda

(GC(66)/17)

Amendment to Article XIV.A of the Statute

Decision adopted on 29 September 2022 during the seventh plenary meeting

1. The General Conference recalls its resolution GC(43)/RES/8, which approved an amendment to Article XIV.A of the Agency's Statute permitting the establishment of biennial budgeting, and its decisions GC(49)/DEC/13, GC(50)/DEC/11, GC(51)/DEC/14, GC(52)/DEC/9, GC(53)/DEC/11, GC(54)/DEC/11, GC(55)/DEC/10, GC(56)/DEC/9, GC(57)/DEC/10, GC(58)/DEC/9, GC(59)/DEC/10, GC(60)/DEC/10, GC(61)/DEC/10, GC(62)/DEC/10, GC(63)/DEC/11, GC(64)/DEC/10 and GC(65)/DEC/11.
2. The General Conference notes that, in accordance with Article XVIII.C (ii) of the Statute, two thirds of all the members of the Agency will have to accept the amendment in order for it to enter into force, but also notes from document GC(66)/7 that as of 24 June 2022 only 61 Member States had deposited instruments of acceptance with the depositary Government. For this reason, the General Conference encourages and urges Member States that have not yet deposited an instrument of acceptance of this amendment to do so as soon as feasible in order to allow the benefits of biennial budgeting to be attained. This would permit the Agency to come into line with the virtually universal practice among United Nations system organizations of biennial budgeting.
3. The General Conference requests the Director General to draw the attention of the governments of Member States to this issue, to submit to the Conference at its 67th (2023) regular session a report on the progress made towards the entry into force of this amendment and to include in the provisional agenda for that session an item entitled "Amendment to Article XIV.A of the Statute".