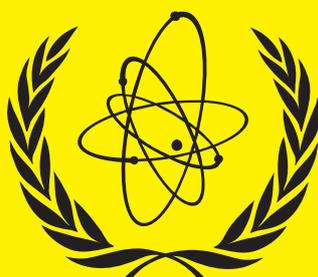


# **Resolutions and Other Decisions of the General Conference**

**Sixty-Second Regular Session  
17–21 September 2018**

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**IAEA**

**International Atomic Energy Agency**



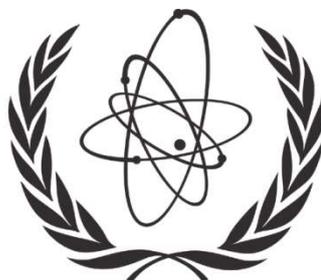
# Resolutions and Other Decisions of the General Conference

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GC(62)/RES/DEC(2018)

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International Atomic Energy Agency



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## **Introductory Note**

1. The 13 resolutions adopted and the 12 other decisions taken by the General Conference at its sixty-second (2018) regular session are reproduced in this booklet.
2. The resolutions are, for ease of reference, preceded by the agenda for the session. Before the title of each resolution a serial number is given by which it may be cited. Any footnotes to a resolution appear immediately after the text on the left side of the page; on the right side are given the date of adoption of the resolution, the relevant agenda item and a reference to the record of the meeting at which the resolution was adopted. The other decisions taken by the Conference are presented similarly.
3. This booklet should be read in conjunction with the summary records of the General Conference, where details of the proceedings are contained (GC(62)/OR.1–9).



## Agenda for the Sixty-Second (2018) Regular Session\*

<u>Item Number</u>	<u>Title</u>	<u>Allocation for initial discussion</u>
1	Election of officers and appointment of the General Committee	Plenary
2	Message from the Secretary-General of the United Nations	Plenary
3	Statement by the Director General	Plenary
4	Arrangements for the Conference	General Committee
5	Contributions to the Technical Cooperation Fund for 2019	Plenary
6	General debate and Annual Report for 2017	Plenary
7	Election of Members to the Board of Governors	Plenary
8	The Agency's Financial Statements for 2017	Committee of the Whole
9	The Agency's Budget Update for 2019	Committee of the Whole
10	Amendment to Article XIV.A of the Statute	Committee of the Whole
11	Scale of assessment of Member States' contributions towards the Regular Budget for 2019	Committee of the Whole
12	Measures to strengthen international cooperation in nuclear, radiation, transport and waste safety	Committee of the Whole

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\* Reproduced from document GC(62)/17.

13	Nuclear security	Committee of the Whole
14	Strengthening of the Agency's technical cooperation activities	Committee of the Whole
15	Strengthening the Agency's activities related to nuclear science, technology and applications	Committee of the Whole
16	Strengthening the effectiveness and improving the efficiency of Agency safeguards	Committee of the Whole
17	Implementation of the NPT safeguards agreement between the Agency and the Democratic People's Republic of Korea	Plenary
18	Application of IAEA safeguards in the Middle East	Plenary
19	Israeli nuclear capabilities	Plenary
20	Promotion of Efficiency and Effectiveness of the IAEA Decision Making Process	Committee of the Whole
21	Elections to the Agency's Staff Pension Committee	Committee of the Whole
22	Examination of delegates' credentials	General Committee
23	Report on contributions pledged to the Technical Cooperation Fund for 2019	Plenary

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GC(62)/INF/1	Inscription in the List of speakers in the General Debate
GC(62)/INF/2	Nuclear Technology Review 2018
GC(62)/INF/3	Nuclear Safety Review 2018
GC(62)/INF/4 and Supplement	Technical Cooperation Report for 2017
GC(62)/INF/5	List of Participants
GC(62)/INF/6	Report on Measures Taken to Facilitate Payment of Contributions and Status Report on Member States Participating in a Payment Plan – Report by the Director General
GC(62)/INF/7	Advance Information for Delegations
GC(62)/INF/8 and Mod.1	Statement of Financial Contributions to the IAEA – Report by the Director General
GC(62)/INF/9	Text of communication dated 28 August 2018 received from the Embassy/Permanent Mission of Libya in Vienna concerning restoration of voting rights



## Resolutions

### GC(62)/RES/1

### The Agency's Financial Statements for 2017

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 2017 and of the report of the Board of Governors thereon.<sup>1</sup>

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<sup>1</sup> GC(62)/5.

*20 September 2018  
Agenda item 8  
GC(62)/OR.7, para. 158*

### GC(62)/RES/2

### Regular Budget Appropriations for 2019

The General Conference,

Accepting the recommendations of the Board of Governors relating to the Regular Budget of the Agency for 2019,<sup>1</sup>

1. Appropriates, on the basis of an exchange rate of US \$1.00 to €1.00, an amount of €371 791 015 for the operational portion of the Regular Budget expenses of the Agency in 2019 as follows:<sup>2</sup>

	€
1. Nuclear Power, Fuel Cycle and Nuclear Science	40 462 537
2. Nuclear Techniques for Development and Environmental Protection	41 108 303
3. Nuclear Safety and Security	36 168 354
4. Nuclear Verification	145 296 779
5. Policy, Management and Administration Services	79 978 272

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<sup>1</sup> Document GC(62)/5.

<sup>2</sup> Appropriation Sections 1–6 represent the Agency's Major Programmes.

6.	Management of Technical Cooperation for Development	25 941 045
	Subtotal of Major Programmes	<hr/> 368 955 290
7.	Reimbursable work for others	2 835 725
	TOTAL	<hr/> 371 791 015

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 €550 000;

from contributions by Member States amounting, at an exchange rate of US \$1.00 to €1.00, to €368 405 290 (€318 855 770 plus US \$49 549 520), in accordance with the scale of assessment fixed by the General Conference in resolution GC(62)/RES/5;

3. Appropriates, on the basis of an exchange rate of US \$1.00 to €1.00, an amount of €6 214 868 for the capital portion of the Regular Budget expenses of the Agency in 2019 as follows:<sup>3</sup>

	€
1. Nuclear Power, Fuel Cycle and Nuclear Science	-
2. Nuclear Techniques for Development and Environmental Protection	2 051 956
3. Nuclear Safety and Security	308 146
4. Nuclear Verification	1 027 152
5. Policy, Management and Administration Services	2 827 614
6. Management of Technical Cooperation for Development	-
TOTAL	<hr/> 6 214 868

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 €6 214 868 (€6 214 868 plus US \$0), in accordance with the scale of assessment fixed by the General Conference in resolution GC(62)/RES/5;

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<sup>3</sup> See footnote 2.

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 2019, 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 2019; 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.

## ATTACHMENT

### A.1. APPROPRIATIONS FOR THE OPERATIONAL PORTION OF THE REGULAR BUDGET IN 2019

#### ADJUSTMENT FORMULA IN EUROS

		€		US\$
1.	Nuclear Power, Fuel Cycle and Nuclear Science	34 788 225	+ (	5 674 312 /R)
2.	Nuclear Techniques for Development and Environmental Protection	36 717 355	+ (	4 390 948 /R)
3.	Nuclear Safety and Security	30 024 259	+ (	6 144 095 /R)
4.	Nuclear Verification	123 336 314	+ (	21 960 465 /R)
5.	Policy, Management and Administration Services	72 318 155	+ (	7 660 117 /R)
6.	Management of Technical Cooperation for Development	22 221 462	+ (	3 719 583 /R)
	Subtotal of Major Programmes	319 405 770	+ (	49 549 520 /R)
7.	Reimbursable work for others	2 835 725	+ (	- /R)
	<b>TOTAL</b>	322 241 495	+ (	49 549 520 /R)

**Note:** R is the average United Nations dollar to euro exchange rate which will be experienced during 2019.

## ATTACHMENT

### A.2. APPROPRIATIONS FOR THE CAPITAL PORTION OF THE REGULAR BUDGET IN 2019

#### ADJUSTMENT FORMULA IN EUROS

	€	US\$
1. Nuclear Power, Fuel Cycle and Nuclear Science	- + (	- /R)
2. Nuclear Techniques for Development and Environmental Protection	2 051 956 + (	- /R)
3. Nuclear Safety and Security	308 146 + (	- /R)
4. Nuclear Verification	1 027 152 + (	- /R)
5. Policy, Management and Administration Services	2 827 614 + (	- /R)
6. Management of Technical Cooperation for Development	- + (	- /R)
TOTAL	6 214 868 + (	- /R)

**Note:** R is the average United Nations dollar to euro exchange rate which will be experienced during 2019.

*20 September 2018  
Agenda item 9  
GC(62)/OR.7, para. 159*

### **GC(62)/RES/3 Technical Cooperation Fund Allocation for 2019**

#### The General Conference,

- (a) Noting the decision of the Board of Governors of June 2017 to recommend the Technical Cooperation Fund target of €86 165 000 for voluntary contributions to the Agency's Technical Cooperation Fund for 2019; and
  - (b) Accepting the foregoing recommendation of the Board,
1. Decides that for 2019 the target figure for voluntary contributions to the Technical Cooperation Fund shall be €86 165 000;
  2. Allocates, in euros, contributions of €86 165 000 for the Agency's technical cooperation programme for 2019; 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 2018 or in 2019 it shall be assessed as appropriate:

- (a) For an advance or advances to the Working Capital Fund, in accordance with Financial Regulation 7.04<sup>2</sup>; 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.

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<sup>2</sup> INFCIRC/8/Rev.4.

## Annex 1

**2019 Scale of Assessment**

Member State	Base rate %	Scale %	Regular Budget assessment		
			€	+	\$
Afghanistan	0.006	0.005	17 564		2 630
Albania	0.008	0.008	24 543		3 705
Algeria	0.155	0.146	475 512		71 796
Angola	0.010	0.009	29 274		4 384
Antigua and Barbuda	0.002	0.002	6 501		991
Argentina	0.858	0.858	2 789 107		425 135
Armenia	0.006	0.006	18 406		2 779
Australia	2.249	2.277	7 399 229		1 129 977
Austria	0.693	0.702	2 279 978		348 188
Azerbaijan	0.058	0.055	177 933		26 866
Bahamas	0.013	0.013	42 259		6 442
Bahrain	0.042	0.042	136 530		20 810
Bangladesh	0.010	0.009	29 274		4 384
Barbados	0.007	0.007	22 755		3 468
Belarus	0.054	0.051	165 662		25 013
Belgium	0.851	0.862	2 799 797		427 573
Belize	0.001	0.001	3 068		463
Benin	0.003	0.003	8 782		1 316
Bolivia, Plurinational State of	0.011	0.010	33 746		5 095
Bosnia and Herzegovina	0.012	0.011	36 814		5 559
Botswana	0.013	0.012	39 882		6 022
Brazil	3.678	3.678	11 956 098		1 822 431
Brunei Darussalam	0.028	0.028	91 020		13 874
Bulgaria	0.043	0.041	131 916		19 917
Burkina Faso	0.004	0.004	11 709		1 754
Burundi	0.001	0.001	2 927		439
Cambodia	0.004	0.004	11 709		1 754
Cameroon	0.010	0.009	30 678		4 632
Canada	2.810	2.845	9 244 923		1 411 842
Central African Republic	0.001	0.001	2 927		439
Chad	0.005	0.004	14 636		2 192
Chile	0.384	0.384	1 248 272		190 270
China	7.621	7.183	23 379 837		3 530 047
Colombia	0.310	0.292	951 023		143 592
Congo	0.006	0.006	19 504		2 973
Costa Rica	0.045	0.042	138 052		20 844
Côte d'Ivoire	0.009	0.008	27 611		4 169
Croatia	0.095	0.090	291 443		44 004
Cuba	0.062	0.058	190 204		28 718
Cyprus	0.041	0.042	134 892		20 601
Czech Republic	0.331	0.331	1 075 984		164 009
Democratic Republic of the Congo	0.008	0.007	23 419		3 507
Denmark	0.562	0.569	1 848 982		282 368
Djibouti	0.001	0.001	2 927		439
Dominica	0.001	0.001	3 251		496
Dominican Republic	0.044	0.041	134 984		20 381
Ecuador	0.064	0.060	196 341		29 645
Egypt	0.146	0.138	447 901		67 627
El Salvador	0.013	0.012	39 882		6 022
Eritrea	0.001	0.001	2 927		439

Annex 1  
2019 Scale of Assessment

Member State	Base rate %	Scale %	Regular Budget assessment	
			€	+
Estonia	0.036	0.034	110 442	16 675
Eswatini	0.002	0.002	6 501	991
Ethiopia	0.010	0.009	29 274	4 384
Fiji	0.003	0.003	9 752	1 487
Finland	0.439	0.444	1 444 315	220 569
France	4.675	4.733	15 380 795	2 348 884
Gabon	0.016	0.016	52 011	7 928
Georgia	0.008	0.008	24 543	3 705
Germany	6.147	6.223	20 223 694	3 088 470
Ghana	0.015	0.014	46 017	6 948
Greece	0.453	0.453	1 472 570	224 459
Grenada	0.001	0.001	3 251	496
Guatemala	0.027	0.025	82 831	12 506
Guyana	0.002	0.002	6 501	991
Haiti	0.003	0.003	8 782	1 316
Holy See	0.001	0.001	3 290	503
Honduras	0.008	0.008	24 543	3 705
Hungary	0.155	0.155	503 859	76 802
Iceland	0.022	0.022	72 376	11 053
India	0.709	0.668	2 175 083	328 408
Indonesia	0.485	0.457	1 487 892	224 652
Iran, Islamic Republic of	0.453	0.427	1 389 721	209 829
Iraq	0.124	0.117	380 409	57 436
Ireland	0.322	0.326	1 059 379	161 784
Israel	0.414	0.419	1 362 061	208 008
Italy	3.606	3.651	11 863 771	1 811 781
Jamaica	0.009	0.008	27 611	4 169
Japan	9.314	9.429	30 643 157	4 679 684
Jordan	0.019	0.018	58 288	8 801
Kazakhstan	0.184	0.173	564 478	85 229
Kenya	0.017	0.016	52 153	7 874
Korea, Republic of	1.962	1.962	6 377 886	972 161
Kuwait	0.274	0.277	901 468	137 668
Kyrgyzstan	0.002	0.002	6 135	927
Lao People's Democratic Republic	0.003	0.003	8 782	1 316
Latvia	0.048	0.045	147 255	22 234
Lebanon	0.044	0.041	134 984	20 381
Lesotho	0.001	0.001	2 927	439
Liberia	0.001	0.001	2 927	439
Libya	0.120	0.120	390 085	59 460
Liechtenstein	0.007	0.007	23 029	3 517
Lithuania	0.069	0.065	211 679	31 960
Luxembourg	0.061	0.062	200 688	30 648
Madagascar	0.003	0.003	8 782	1 316
Malawi	0.002	0.002	5 855	877
Malaysia	0.310	0.310	1 007 719	153 603
Mali	0.003	0.003	8 782	1 316
Malta	0.015	0.015	48 761	7 432
Marshall Islands	0.001	0.001	3 068	463
Mauritania	0.002	0.002	5 855	877

## Annex 1

2019 Scale of Assessment

Member State	Base rate %	Scale %	Regular Budget assessment		
			€	+	\$
Mauritius	0.011	0.010	33 746		5 095
Mexico	1.381	1.381	4 489 225		684 279
Monaco	0.010	0.010	32 898		5 024
Mongolia	0.005	0.005	15 339		2 316
Montenegro	0.004	0.004	12 271		1 853
Morocco	0.052	0.049	159 527		24 086
Mozambique	0.004	0.004	11 709		1 754
Myanmar	0.010	0.009	29 274		4 384
Namibia	0.010	0.009	30 678		4 632
Nepal	0.006	0.005	17 564		2 630
Netherlands	1.426	1.444	4 691 557		716 474
New Zealand	0.258	0.261	848 821		129 628
Nicaragua	0.004	0.004	11 709		1 754
Niger	0.002	0.002	5 855		877
Nigeria	0.201	0.189	616 631		93 103
Norway	0.817	0.827	2 687 934		410 489
Oman	0.109	0.109	354 327		54 009
Pakistan	0.089	0.084	273 035		41 225
Palau	0.001	0.001	3 251		496
Panama	0.033	0.031	101 238		15 285
Papua New Guinea	0.004	0.004	13 003		1 982
Paraguay	0.013	0.012	39 882		6 022
Peru	0.131	0.123	401 884		60 680
Philippines	0.159	0.150	487 783		73 649
Poland	0.809	0.763	2 481 864		374 728
Portugal	0.377	0.377	1 225 516		186 802
Qatar	0.259	0.262	852 111		130 131
Republic of Moldova	0.004	0.004	12 271		1 853
Romania	0.177	0.167	543 004		81 987
Russian Federation	2.971	3.008	9 774 621		1 492 736
Rwanda	0.002	0.002	5 855		877
Saint Vincent and the Grenadines	0.001	0.001	3 251		496
San Marino	0.003	0.003	9 752		1 487
Saudi Arabia	1.103	1.103	3 585 529		546 531
Senegal	0.005	0.004	14 636		2 192
Serbia	0.031	0.029	95 102		14 360
Seychelles	0.001	0.001	3 251		496
Sierra Leone	0.001	0.001	2 927		439
Singapore	0.430	0.435	1 414 708		216 048
Slovakia	0.154	0.145	472 444		71 333
Slovenia	0.081	0.082	266 494		40 698
South Africa	0.350	0.330	1 073 736		162 120
Spain	2.350	2.379	7 731 521		1 180 723
Sri Lanka	0.030	0.028	92 034		13 896
Sudan	0.010	0.009	29 274		4 384
Sweden	0.920	0.931	3 026 804		462 239
Switzerland	1.097	1.111	3 609 140		551 172
Syrian Arab Republic	0.023	0.022	70 560		10 653
Tajikistan	0.004	0.004	12 271		1 853
Thailand	0.280	0.264	858 989		129 696

## Annex 1

2019 Scale of Assessment

Member State	Base rate %	Scale %	Regular Budget assessment		
			€	+	\$
The former Yugoslav Republic of Macedonia	0.007	0.007	21 475		3 242
Togo	0.001	0.001	2 927		439
Trinidad and Tobago	0.033	0.033	107 273		16 351
Tunisia	0.027	0.025	82 831		12 506
Turkey	0.979	0.923	3 003 393		453 473
Turkmenistan	0.025	0.025	81 268		12 387
Uganda	0.009	0.008	26 347		3 946
Ukraine	0.099	0.093	303 714		45 857
United Arab Emirates	0.581	0.588	1 911 499		291 915
United Kingdom of Great Britain and Northern Ireland	4.294	4.347	14 127 299		2 157 456
United Republic of Tanzania	0.010	0.009	29 274		4 384
United States of America	25.000	25.308	82 250 248		12 560 885
Uruguay	0.076	0.076	247 053		37 658
Uzbekistan	0.022	0.021	67 492		10 191
Vanuatu	0.001	0.001	2 927		439
Venezuela, Bolivarian Republic of	0.549	0.517	1 684 231		254 297
Viet Nam	0.056	0.050	163 932		24 550
Yemen	0.010	0.009	29 274		4 384
Zambia	0.007	0.006	20 492		3 069
Zimbabwe	0.004	0.004	12 271		1 853
<b>TOTAL</b>	<b>100.000</b>	<b>100.000</b>	<b>325 070 638</b>	<b>[a]</b>	<b>49 549 520 [a]</b>

[a] See document GC(62)/2, The Agency's Budget Update for 2019.

20 September 2018  
 Agenda item 11  
 GC(62)/OR.7, para. 161

## GC(62)/RES/6 Nuclear and Radiation Safety

### The General Conference,

- (a) Recalling resolution GC(61)/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) Recognizing the prime responsibility of operators for nuclear safety,
- (j) Recognizing the importance of Member States establishing and maintaining effective and sustainable regulatory infrastructures,
- (k) Acknowledging that research, development and the introduction of innovative methods and technologies are of fundamental importance in improving nuclear safety worldwide,
- (l) 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,
- (m) 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 Source,
- (n) 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),
- (o) 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,
- (p) Noting the need for the Agency to continue to keep abreast of scientific and technological innovations, including with regards to transportable nuclear power plants and small and medium sized or modular reactors,

- (q) Recalling maritime and air navigation rights and freedoms, as provided for in international law and as reflected in relevant international instruments,
- (r) Recalling resolution GC(61)/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,
- (s) 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,
- (t) Recognizing the importance of communication with and outreach to the public, for the purpose of enhancing public awareness regarding nuclear safety and the effects of ionizing radiation,
- (u) Recognizing that nuclear accidents may have transboundary effects, and may raise public concerns about nuclear energy and about the effects of radiation on present and future generations and the environment,
- (v) Recognizing that radiological emergencies may also raise concerns,
- (w) Emphasizing the importance of Member States and relevant international organizations responding to nuclear and radiological emergencies, in a timely, effective and transparent manner,
- (x) 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,
- (y) 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,
- (z) Welcoming the Agency's organization of the International Symposium on Communicating Nuclear and Radiological Emergencies to the Public, which will take place in Vienna in October 2018 to promote effective public communication during a nuclear or radiological emergency, and to provide a forum for networking and experience exchange,
- (aa) Emphasizing the importance of capacity building in establishing and maintaining an adequate nuclear, radiation, transport and waste safety and emergency preparedness infrastructure,
- (bb) 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,

(cc) 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,

(dd) 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 accident, and further recognizing that such activities can be of interest to other organizations or regulatory authorities,

(ee) 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,

(ff) 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,

(gg) 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,

(hh) Emphasizing the need to prepare for decontamination or remediation following a nuclear or radiological incident or accident, which may involve planning for the safe management of large volumes of waste or unusual waste forms,

(ii) Noting the importance of decommissioning programmes and spent fuel and radioactive waste management activities as facilities reach end of life,

(jj) Recalling United Nations General Assembly resolution A/RES/72/76 of 14 December 2017 related to the effects of atomic radiation, and the Board decision in March 1960 on health and safety measures (INFCIRC/18),

(kk) 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,

(ll) 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, and

(mm) 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,

### **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;
2. Encourages Member States, particularly those considering introducing nuclear power or radiation technology or engaging in international nuclear cooperation, to develop, maintain and improve their nuclear safety and safety infrastructure and related scientific and technical capabilities; and both requests the Secretariat and encourages other Member States in a position to do so, to assist those Member States in this regard, upon request, in a coordinated, efficient and sustainable manner;
3. 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;
4. 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;
5. Requests the Secretariat, in consultation with Member States, to continue considering the implications of institutional strength in depth;
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, 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. Urges Member States receiving assistance from the Agency to update information in the IAEA Radiation Safety Information Management System (RASIMS) so as to enable the Secretariat to identify the technical assistance needed to strengthen radiation safety infrastructure;

9. 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;

10. 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 XXIII FORO Plenary (Brasilia, 5–6 July 2018) and the experience gained from the Topical Peer Review on the Ageing Management of NPPs, coordinated by ENSREG in 2017 and 2018;

11. 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, 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);

12. 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;

13. 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;

14. 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**

15. 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;

16. 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;
17. 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;
18. Requests the Secretariat to provide full support for the dissemination of the outcomes of the 6th Joint Convention Review Meeting, and to consider addressing these in the Agency's activities, as appropriate and in consultation with Member States;
19. 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;
20. 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;
21. 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;
22. Urges Member States with research reactors to apply the guidance of the Code of Conduct on the Safety of Research Reactors and encourage Member States to freely exchange their regulatory information and experience with regard to 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;
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 in the lead up to the fifth International Conference on Effective Regulatory Systems for Nuclear and Radiation Safety in 2019, and to report regularly about the progress of actions taken;

26. 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;
27. Encourages Member States to consider establishing technical and scientific support organizations (TSOs), as appropriate, and requests the Secretariat to promote cooperation between Member States and to assist, upon request, in this regard;
28. 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;
29. Encourages the International Nuclear Safety Group (INSAG) Chairperson to continue to communicate to Member States on a regular basis about major outcomes and recommendations of INSAG to the Director General;
30. Encourages Member States to work towards establishing a global nuclear liability regime and, as appropriate, to give due consideration to the possibility of joining the international nuclear liability instruments;
31. 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;
32. 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 the Secretariat to report on the continuing work of INLEX;
33. Requests that INLEX, via the Secretariat, and in light of the practice established by INSAG, informs Member States on a regular and transparent basis about the work of INLEX and its recommendations to the Director General;
34. Requests that INLEX, via the Secretariat, shares the existing recommendations made by INLEX regarding insurance or other financial security for at least Categories 1 and 2 sources, and encourages Member States, as appropriate, to take these into consideration;

### **3.**

#### **IAEA Safety Standards**

35. Encourages Member States to implement measures nationally, regionally and internationally to ensure nuclear, radiation, transport and waste safety, as well as emergency preparedness and response, taking into account IAEA Safety Standards;
36. 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;
37. Requests the Agency to continue to support the work of the Commission on Safety Standards (CSS) and the Safety Standards Committees;

38. Urges the Secretariat to improve the publication process and the coherence of translation of Safety Standards in all IAEA official languages, and to take measures so that the backlog of drafts which were endorsed by the Commission on Safety Standards as long ago as April 2015 is eliminated without further delay, and further urges the Secretariat to improve the editing process of drafts so that they may be 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 Commission and Committees;
40. Requests the Agency to continuously review, strengthen, promulgate and implement as broadly and effectively as possible the IAEA Safety Standards;
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. Welcomes the improvement of the Nuclear Safety and Security Series Online User Interface (NSS-OUI) and invites Member States to use it and to provide feedback on its content and performance to the Secretariat;
43. 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;

**4.**

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

44. Encourages Member States to ensure regular self-assessments of their domestic nuclear, radiation, transport and waste safety, as well as emergency preparedness and response, taking into account the Agency's self-assessment tools and, on a voluntary basis, 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;
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. Welcomes the introduction of and the completion of the first Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Radiation (ARTEMIS) peer review missions and encourages Member States to make further use of these IAEA services;

49. Encourages interested Member States, including countries introducing nuclear power or radiation technologies, to invite Emergency Preparedness Review (EPREV) or EPREV follow-up missions on a voluntary basis;

50. Requests the Secretariat to continue to cooperate with Member States and the World Health Organization (WHO) to ensure that the IAEA's 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**

51. Recalls the outcomes of the 7th Review Meeting of the Contracting Parties to the CNS, including the actions agreed to strengthen the participation in and effectiveness and transparency of the Convention, the major common issues and good practices and areas of good performance identified by the President and the country groups and the challenges identified for Contracting Parties, and encourages all Member States to contribute to the realization of CNS objectives, including those enshrined 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;

52. Requests the Secretariat, in consultation with Member States, to continue to facilitate information exchange between interested Member States to share experience on implementing safety improvements at existing nuclear power plants;

53. Renews the request to the Secretariat, in consultation with all Member States, using the safety issues highlighted in the summary report of the 6th 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 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 to the Agency's web-based reporting systems related to operational experience;

55. Requests the Secretariat to continue efforts in the area of ageing management for the long-term safe operation of nuclear power plants and research reactors, and to support Member States, upon request, in establishing ageing management programmes, including the identification and implementation of reasonably practicable safety improvements, and encourages Member States to make use of the IAEA safety services for NPPs (Safety Aspects of Long Term Operation (SALTO)-missions) and the recently adapted version of SALTO for research reactors;

56. Encourages Member States to address, where appropriate, ageing management efficiently and effectively throughout the lifetime of the nuclear power plant and benefit also from available international cooperation and activities in this regard;

57. 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;

58. 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 multiple extreme events, and share their experience and the results of such assessments with other interested Member States;

59. 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;

60. Further encourages Member States to exchange regulatory information and share experiences with regard to new nuclear power plants, 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 early radioactive releases or radioactive releases large enough to require long-term protective measures and actions;

61. Encourages the Secretariat to provide for the exchange of information and experience of conducting the safety assessment of the digital Instrumentation and Control system;

62. Encourages the Agency to facilitate the exchange of results of research and development on severe accident management strategies for nuclear power plants;

63. 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 Station accident, and requests the Secretariat to support their efforts through training workshops;

64. 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;

65. Takes note that there are ongoing projects to construct and deploy transportable nuclear power plants (TNPPs) and small and medium, or modular reactors (SMRs), and also takes note that these installations should be developed and operated pursuant to the existing safety frameworks for nuclear power plants, requests the Secretariat to continue considering the safety and security aspects of TNPPs and SMRs throughout their life cycle, including through the International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) and the Small Modular Reactor Regulators' Forum and, to draw upon the knowledge and experience of other international organizations 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 key regulatory challenges related to their lifecycles, and requests that the Secretariat hold a comprehensive briefing on all their work on TNPPs in the fourth quarter of 2018;

6.

**Radiation Safety and Environmental Protection**

66. 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, 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;
67. 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;
68. Requests the Secretariat to promote 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;
69. Requests the Secretariat to make recommendations and assist Member States, upon request, to enhance radiation safety of workers by utilizing efficient and effective dosimetry techniques;
70. 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);
71. Requests the Agency, in cooperation with the WHO and in coordination with other international organizations, to continue implementation of the *Bonn Call for Action*, as reviewed at the follow-up IAEA conference in Vienna in 2017, to strengthen the radiation protection of patients and health professionals and to enhance the safety of radiological procedures;
72. 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;
73. Requests the Secretariat to promote the implementation of forthcoming radiation protection guidance for the regulatory control of the use of human imaging techniques for non-medical purposes;
74. 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, and requests the Secretariat, in cooperation with Member States, the WHO and other relevant international organizations, to assist Member States in this regard;
75. Requests the Secretariat to develop principles for harmonized guidance on radionuclide activity concentration values in food and drinking water, in continued cooperation with relevant international organizations and national authorities;
76. Requests the Secretariat to continue work to develop a technical document to set out radionuclide activity concentration values for contaminated non-food commodities, in consultation with Member States and relevant international organizations;
77. Encourages the participation of Member States in the second phase of the Modelling and Data for Radiological Impact Assessments (MODARIA II) programme;

78. 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**

79. Urges Member States that do not have national regulatory documents governing the safe transport of radioactive material to adopt and implement such documents expeditiously, calls upon all Member States to ensure that such regulatory documents are in conformity with the applicable edition of the IAEA’s Regulations for the Safe Transport of Radioactive Material (SSR-6), and welcomes the publication of SSR-6 (Rev.1);

80. 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;

81. 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 on shipment of radioactive materials to achieve a satisfactory and timely resolution of this issue;

82. 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;

83. 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;

84. 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;

85. 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**

86. 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, and put mechanisms in place to ensure adequate resources are available, and to share experience and lessons learned in this regard;

87. Takes note of the outcomes of the 6th 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 further topical discussion in the Joint Convention on the safety of the back-end of the nuclear fuel cycle;

88. Encourages the Agency to continue its activities relating to the safety of facilities for the geological disposal of radioactive waste and, where appropriate, spent nuclear fuel, and takes note of the importance of the early engagement of regulatory bodies before the licensing process is launched;

89. Requests the Secretariat to foster information exchange on safety-related aspects of long-term storage of spent nuclear fuel and radioactive waste;

90. Reaffirms 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;

91. 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**

92. Encourages Member States to plan for the safe decommissioning of facilities 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;

93. 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;

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

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

96. 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;

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

**10.**

**Capacity-building**

98. 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 further encourages Member States to ensure that resources are made available for capacity building of this kind;

99. 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;

100. 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;

101. 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 to continue to strengthen its effort in maintaining and developing the Global Nuclear Safety and Security Network (GNSSN), including the development of the knowledge platforms, and encourages Member States to actively participate in the GNSSN;

102. Encourages Member States to benefit, as appropriate, from the IAEA Systematic Approach to Training (SAT) and other relevant tools for the self-assessment of capacity building programmes at national and organizational level;

103. 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;

104. Welcomes the Third International Conference on Human Resources Development for Nuclear Power Programmes: Meeting Challenges to Ensure the Future Nuclear Workforce Capability, which was held in Gyeongju, Republic of Korea, from 28–31 May 2018;

**11.**

**Safe Management of Radioactive Sources**

105. 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;

106. 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;

107. 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;

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

109. 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;

110. 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;

## **12.**

### **Nuclear and Radiological Incident and Emergency Preparedness and Response**

111. 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 enhancing 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;

112. 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 emphasising the importance of large-scale exercises, such as ConvEx-3;

113. Encourages Member States to ensure that radiation protection strategies are developed, justified and optimized to enable effective protective actions 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;

114. 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 continuing to refine the role of the Incident and Emergency Centre (IEC), during an emergency;

115. 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;

116. 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;

117. 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, and 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;

118. Encourages Member States to consider sharing this information with the general public, as appropriate, including through the USIE mechanism;

119. 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;

120. Recalls the 9th 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;

121. 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;

122. Encourages the Secretariat to continue utilizing the International Radiation Monitoring Information System (IRMIS), 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 provide data to the system;

123. 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;

124. Requests the Secretariat, in close consultation with Member States, to review the Agency's arrangements for reporting nuclear incidents and accidents, 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;

125. 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, including through the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE);

**13.**

**Implementation and Reporting**

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

127. Requests the Director General to report in detail at the sixty-third (2019) regular session of the General Conference on implementation of this resolution, and on other relevant developments in the intervening period.

*20 September 2018  
Agenda item 12  
GC(62)/OR.7, para. 162*

**GC(62)/RES/7**

**Nuclear Security**

The General Conference,

- (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 2018 submitted by the Director General in document GC(62)/10 and of the Nuclear Security Plan for 2018–2021 approved by the Board of Governors in document GC(61)/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) Asserting that the responsibility for nuclear security within a State rests entirely with that State, and mindful of 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,
- (e) Acknowledging that science, technology and engineering present opportunities to enhance nuclear security, and stressing the need to address current and evolving challenges to nuclear security, while reaffirming that the responsibility for nuclear security within a State rests entirely with that State,
- (f) Recalling with appreciation the International Conferences on Nuclear Security in 2013 and 2016 and their related Ministerial Declarations, and taking note of valuable technical expert discussions reflected in the Presidents' Reports and looking forward to the International Conference on Nuclear Security to be held in February 2020,
- (g) Recognizing the importance of maintaining a dialogue, as appropriate, between government bodies and nuclear industry at national level on strengthening nuclear security,

- (h) 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,
- (i) Acknowledging that nuclear security may contribute to the positive perception, at a national level, of peaceful nuclear activities,
- (j) Recognizing the central role of the Agency, as emphasized for instance by the 16th Summit of the Non-Aligned Movement (NAM) held in August 2012, in developing comprehensive nuclear security guidance documents and, on request, providing assistance to Member States in order to facilitate their implementation,
- (k) 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,
- (l) 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,
- (m) Reaffirming the importance of the Convention on the Physical Protection of Nuclear Material (CPPNM) and its 2005 Amendment extending its scope, welcoming the entry into force of that Amendment, recognizing the importance of acceptance, approval or ratification by further States, and noting the importance of its full implementation and universalization,
- (n) 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,
- (o) Recognizing the importance of minimizing the use of highly enriched uranium (HEU) and using low enriched uranium (LEU) where technically and economically feasible,
- (p) 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,
- (q) 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,
- (r) 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,
- (s) 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,

- (t) 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,
- (u) 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,
- (v) 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,
- (w) Noting the importance of security of 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 unauthorized removal or sabotage,
- (x) 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,
- (y) 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,
- (z) Recognizing physical protection as a key element of nuclear security,
- (aa) 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,
- (bb) Recognizing the importance of considering nuclear and radiological security when organizing major public events, commending the work done by the Agency in providing, upon request, technical assistance and expert support to countries hosting major public events, and
- (cc) Stressing the essential importance of ensuring the confidentiality of information relevant to nuclear security,
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 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 the Secretariat to continue to implement the Nuclear Security Plan 2018–2021 (GC(61)/24) accordingly and in a comprehensive manner;
4. Encourages the Agency to enhance its technical capabilities and keep abreast of scientific and technological innovations with a view to confronting current and evolving challenges and risks to nuclear security;
5. Calls upon the Secretariat to continue to organize International Conferences on Nuclear Security every three years and encourages all Member States to participate at ministerial level;
6. 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;
7. 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 nuclear 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;
8. 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;
9. 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, welcomes the organization by the Secretariat of CPPNM meetings and encourages all States Parties to the Convention to participate in relevant meetings;
10. Calls upon the Director General, as Depositary of the Amended CPPNM, to consult with the States Parties to the Amended CPPNM and Euratom on the preparations for convening a conference to review the implementation of the Amended CPPNM and its adequacy as concerns the preamble, the whole of the operative part and the Annexes in light of the then prevailing situation, in accordance with Article 16 of the Convention, and encourages all States Parties and Euratom to assist the Depositary with preparations for such conference, which is due to take place in 2021;
11. Encourages all Member States that have not yet done so to become parties to the International Convention on the Suppression of Acts of Nuclear Terrorism as soon as possible;
12. Encourages the Secretariat, 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;
13. Requests the Secretariat to improve 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;

14. 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;

15. 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;

16. 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 encountered out of regulatory control;

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

18. Encourages the Agency to continue, in coordination with Member States, to actively fulfill 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;

19. Encourages the Secretariat to promote international exchanges of experience, knowledge and good practices as regards 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 nuclear security culture;

20. Encourages the Secretariat, in consultation with Member States, to increase its assistance to States, upon request, on the development and consolidation of a nuclear security culture, including publishing guidance, providing training activities and offering related self-assessment and training materials and tools;

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

22. Encourages ongoing initiatives of Member States, in cooperation with the Secretariat, to further enhance nuclear security culture, as well as skills and knowledge of personnel through nuclear security education and training, and through dialogue with the nuclear industry and collaborative 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 taking into

account and promoting relevant Nuclear Security Series publications, and requests the Secretariat to continue to report to the Board of Governors on its activities in this respect;

23. 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;

24. 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;

25. 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;

26. 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;

27. 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;

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

29. 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;

30. 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 further 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;

31. 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;

32. Encourages Member States to conduct exercises to strengthen national capacities to prepare and respond to a nuclear security event involving nuclear or other radioactive material;
33. 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 encourages all States to join and participate actively in the ITDB programme in support of their national efforts to prevent, detect and respond to radioactive and nuclear materials that may have fallen out of regulatory control;
34. Encourages States to continue efforts on their territory to recover and secure nuclear and other radioactive material that has fallen out of regulatory control;
35. 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);
36. 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;
37. 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;
38. 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 of 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;
39. 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;
40. 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;
41. 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;

42. 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;
43. 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;
44. 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;
45. Encourages Member States to make use of the IAEA Nuclear Security Information Management System (NUSIMS), on a voluntary basis;
46. 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;
47. Requests the Director General to submit an annual Nuclear Security Report to the General Conference at its sixty-third (2019) regular session on activities undertaken by the Agency in the area of nuclear security, and on external users of 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; and
48. Requests the Secretariat to implement the actions called for in this resolution in a prioritized manner within available resources.

*20 September 2018  
Agenda item 13  
GC(62)/OR.7, para. 163*

**GC(62)/RES/8**

**Strengthening of the Agency's technical cooperation activities**

**1.  
General**

The General Conference,

- (a) Recalling resolution GC(61)/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 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) Welcoming the adoption of the 2030 Agenda for Sustainable Development by the United Nations General Assembly in 2015 (A/RES/70/1),
- (i) Recalling the Brussels Declaration on the LDCs and the 2011–2020 Programme of Action of the Fourth United Nations Conference on the Least Developed Countries and the Istanbul Declaration on the Least Developed Countries: Time for Action,
- (j) Taking into account that the TC programme of the Agency is needs-based,
- (k) 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”,

(l) Mindful of the increasing number of Member States requesting TC projects, which requires adequate resources for the Agency to meet these demands,

(m) 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,

(n) 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,

(o) Mindful of the shared responsibility of all Member States towards supporting and enhancing TC activities of the Agency, and

(p) Recognizing the success of 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 over the last six decades in meeting their developmental priorities through the peaceful applications of nuclear science and technology and also welcoming with satisfaction that the Conference participants recognized the benefits derived by Member States from the TC programme,

1. Stresses that, when formulating the TC programme, the Secretariat should adhere strictly to the provisions of the Statute and the guiding principles and policies as contained in INFCIRC/267 and to 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; and

2. Stresses the importance of the Revised Supplementary Agreement (RSA) and encourages all Member States receiving technical cooperation to sign a RSA Concerning the Provision of Technical Assistance by the Agency and implement its provisions.

## 2.

### **Strengthening technical cooperation activities**

(a) Considering that the strengthening of technical cooperation activities in the fields of — inter alia — food and agriculture, human health, water resource management, biotechnology, 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) Recognizing that the TC programme continues to contribute to the achievement of national and regional goals for sustainable development, particularly in developing countries,

- (c) Further recognizing that the TC programme has contributed to the achievement of the Millennium Development Goals (MDGs),
- (d) Looking forward to the Agency's continued support to Member States, in particular through the TC programme, in realizing the Sustainable Development Goals (SDGs) in line with the principle of national ownership,
- (e) Recognizing the Director General's initiative in selecting 'Nuclear Technology for Climate: Mitigation, Monitoring and Adaption' as a key focus area in 2018, as reflected in the Scientific Forum during the 62nd General Conference, and aware of the role of TC projects in strengthening national and regional capacities in this regard,
- (f) 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 guidelines 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,
- (g) 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,
- (h) 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,
- (i) Recognizing that the integration of the Programme of Action for Cancer Therapy (PACT) into the TC programme should contribute to strengthening and facilitating the programmatic delivery of PACT in close cooperation and coordination with all relevant stakeholders,
- (j) Recognizing the important role of the Agency in comprehensive cancer control, including through PACT and in coordination with all relevant stakeholders, and noting the establishment of a Task Force to follow up on the report of the Office of Internal Oversight Services (OIOS) on PACT as contained in document GOV/2018/11,
- (k) 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 over the past 16 years and the Agency's efforts in this regard,
- (l) 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, and

(m) Welcoming the Secretariat's efforts to promote gender equality throughout the TC programme, including the support shown to the *International Gender Champions* initiative,

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 strengthen the Agency's TC activities, in consultation with Member States, through the development of effective programmes with well-defined outcomes aimed at promoting and improving the scientific, technological, research and regulatory capabilities of the Member States implementing projects, account being taken of the infrastructure and the level of technology of the countries concerned, by continuing to assist them in their peaceful, safe, secure and regulated 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. 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;
6. 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;
7. 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;
8. Requests the Secretariat to update Member States on the work of the Task Force in following up on the OIOS report on PACT as contained in document GOV/2018/11;
9. 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; and

10. Requests the Secretariat to continue close consultations with Co-Chairs and Member States on the preparation of the 2018 Ministerial Conference on nuclear science, technologies and applications for peaceful uses, and their delivery to Member States through the Agency's TC programme, while highlighting their future contribution to sustainable development and encourages Member States to participate at ministerial level.

### **3.**

#### **Effective execution of the technical cooperation programme**

(a) Reiterating the need to strengthen technical cooperation activities and to further enhance the effectiveness, efficiency and transparency of the TC programme, 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 2020–2021 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 to introduce outcome monitoring to the TC programme, through a number of pilot projects in the 2016–2017 programme cycle, and

(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,

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. 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;
4. 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;
5. 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;
6. Requests the Secretariat to keep Member States informed of the results of the efforts to implement outcome monitoring in the TC programme and to report on the implementation of outcome monitoring in the pilot projects on human health and nutrition, including the associated potential human and financial resource implications;
7. 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;
8. 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;
9. Requests the Secretariat to continue providing updates on the progress of TC programme implementation in between annual TC reports; and
10. 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 Country Programme Framework (CPF) or national development plan and further requests the External Auditor to report the results to the Board of Governors.

#### **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, as approved by the Board of Governors in September 2014 (GOV/2014/49) and the recommendations contained therein,

(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/2017/27, to set the target for voluntary contributions to the TCF at the level of €85 665 000 in 2018 and €86 165 000 in 2019, and that the Indicative Planning Figure (IPF) for 2020 shall be €86 165 000 and for 2021 shall be €86 165 000,

(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 ongoing efforts of the Secretariat to respond to Member States' request (included in decision GOV/2011/37) to reassess the application of the due account mechanism with a view to its possible future strengthening, and noting the ongoing discussions with regard to document GOV/2017/27, which was approved by the Board of Governors and which invited the Chairperson of the Board of Governors to continue consultations on the proposed changes to the due account mechanism with a view to submitting it for the Board of Governors' approval as soon as possible and its application as of the 2020–2021 TC cycle, and recognizing that the effectiveness of the due account mechanism depends on its consistent application,

- (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 2017, which was 97.7%, including the deferred or additional payments made by Member States, and looking forward to reaching the rate of 100%, which is central to demonstrating the commitment of Member States to the Agency's TC programme,
- (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 make every effort to strictly apply the due account mechanism equally, efficiently and effectively, and to further consult with Member States, in a timely manner, regarding specific guidelines for its application, and its approval by the Policy-Making Organs of the Agency;
  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. Welcomes the Progress Reports on the Secretariat's Implementation of the Recommendations 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, as contained in GOV/INF/2015/4 and GOV/INF/2016/7 and calls upon Member States and the Secretariat to continue to take the necessary actions on the recommendations made by the Working Group.

## 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 increase in the number of United Nations Development Assistance Frameworks (UNDAFs) 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 UNDAFs, 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) Recognizing the role of the International Conference on the IAEA Technical Cooperation Programme: Sixty Years and Beyond — Contributing to Development in strengthening partnerships with a wide range of TC stakeholders and partners and noting that it helped stakeholders in the TC programme, partner agencies and potential collaborators to develop a solid understanding of the contribution that the TC programme can make to Member States' development efforts, including in achieving the SDGs,

(h) 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

(i) Noting the approval of the Strategic Guidelines on Partnerships and Resource Mobilization, as contained in document GOV/2015/35, and looking forward to the report of the Director General in 2019 on the progress made in applying these guidelines, while recalling the importance of keeping Member States regularly informed of developments in this regard,

1. 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;

2. 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 him 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;

3. 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);

4. 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

5. 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-third (2019) 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".

*20 September 2018  
Agenda item 14  
GC(62)/OR.7, para. 164*

**GC(62)/RES/9**

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

## **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) Stressing the importance of the Paris Agreement at the twenty-first Conference of the Parties (COP 21) of the United Nations Framework Convention on Climate Change,
- (h) Noting the Medium Term Strategy as noted by the Board of Governors,
- (i) Taking note of the *Nuclear Technology Review 2018* (document GC(62)/INF/2),
- (j) 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,
- (k) Recognizing the success of science and technology studies in enhancing scientific communication and their contribution to training the trainer,
- (l) 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,

- (m) Acknowledging the need for increasing the capacity of Member States for using advanced nuclear techniques in disease management, including cancer, and aware of the need to develop performance indicators for measuring such capacity,
- (n) 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, the IAEA/World Health Organization (WHO) Network of Secondary Standards Dosimetry Laboratories (SSDL Network) services and dosimetry audit networks,
- (o) 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,
- (p) 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,
- (q) 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, including through the IAEA/WHO SSDL Network and dosimetry audit services,
- (r) Aware that the events sponsored by the IAEA Nobel Peace Prize Cancer and Nutrition Fund have led to 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 looking forward to the International Symposium on Understanding the Double Burden of Malnutrition for Effective Interventions organized in cooperation with the WHO and the United Nations Children's Fund (UNICEF), to be held in Vienna from 10–13 December 2018,
- (s) Aware of events sponsored by the Agency to increase the capacity of Member States in the field of medical radiation dosimetry and looking forward to the International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry (IDOS 2019), to be held in Vienna from 18–21 June 2019,
- (t) 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,
- (u) Recognizing the efforts of the Agency to promote the education and training of medical physicists and in particular, the success of the International Centre for Theoretical Physics (ICTP) Master of Advanced Studies programme in Medical Physics, based on Agency guidelines,
- (v) Recognizing the continuing activities within the UN Joint Global Programme on Cervical Cancer Prevention and Control,

- (w) Stressing the importance of continued assistance to Member States, in collaboration with external partners, in the fight against cancers affecting women,
- (x) Noting that the Dosimetry Laboratory services have been expanded to enhance dosimetry in hospitals and the development of education and training activities,
- (y) Acknowledging the long-term benefits of Coordinated Research Projects (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,
- (z) 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 Programme, the Revised Arrangements regarding the work of the Joint FAO/IAEA Division for Nuclear Techniques in Food and Agriculture, signed in 2013, the FAO's Strategic Framework for 2010–2019, and the FAO's five strategic objectives,
- (aa) Welcoming the support of the Joint FAO/IAEA Division to control outbreaks of certain diseases in Africa, Latin America and the Caribbean, Asia and Europe,
- (bb) Recognizing the need for preventive measures and the importance of addressing the challenges posed by climate change and the rise in animal disease outbreak,
- (cc) Further recognizing the success of the sterile insect technique (SIT) in the suppression or eradication of populations of pests,
- (dd) Aware of the activities of the Latin American and Caribbean Analytical Network (RALACA), composed of national food safety institutes in 21 countries in Latin America and the Caribbean, to address food contamination issues and improve environmental and food safety with health, trade and economic benefits; and the Veterinary Disease Diagnostic Laboratories Network (VETLAB Network) of 44 African and 19 Asian national animal disease diagnostic laboratories in disseminating the use of nuclear techniques for the diagnosis and control of transboundary animal and zoonotic diseases,
- (ee) 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,
- (ff) Welcoming the ongoing the modernization of the NA Laboratories in Seibersdorf and the ongoing implementation of the ReNuAL and the ReNuAL+ projects 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.
- (gg) 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,

- (hh) 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,
- (ii) 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,
- (jj) 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 organising regular proficiency tests, inter-laboratory comparisons, and producing certified reference materials from a wide range of environmental matrices,
- (kk) 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 176 laboratories from 89 Member States,
- (ll) Acknowledging the important contribution of the Ocean Acidification International Coordination Centre at the IAEA 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,
- (mm) 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,
- (nn) 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,
- (oo) 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,
- (pp) Noting the expanding use of positron emission tomography (PET), PET-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,

- (qq) 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,
- (rr) 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),
- (ss) 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,
- (tt) 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,
- (uu) 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,
- (vv) Aware that greater regional and international cooperation, including regional research reactors 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,
- (ww) 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) experiments and biennial IAEA Fusion Energy Conferences, and taking note of the 27th biennial IAEA Fusion Energy Conference (FEC2018), to be held in India in October 2018,
- (xx) 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, and
- (yy) Noting with appreciation the on-going efforts of the Secretariat, together with Member States, under the programme and budget for 2018–2019, 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,

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 the 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 continue close consultations with Co-Chairs and Member States on the preparation of the 2018 Ministerial Conference on nuclear science, technologies and applications for peaceful uses, and their delivery to Member States through the Agency's Technical Cooperation programme, while highlighting their future contributions to sustainable development, and encourages Member States to participate at ministerial level;
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. the use of radioisotopes and radiation in human health,
  - ii. nuclear applications related to food and agriculture, such as climate-smart agriculture, land and water management, crop improvement and management in light of climate change,
  - iii. use of the SIT to establish tsetse-free zones and to combat mosquitoes transmitting diseases including dengue, malaria and zika, and the Mediterranean fruit fly,

- 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 radiopharmaceuticals, and
  - xi. use of radiation technology for development of novel materials, as well as the treatment of waste water, flue gases and other pollutants resulting from industrial activities;
9. 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;
10. Urges the Secretariat to further strengthen the IAEA-UN Environment partnership, in close consultation with Member States to 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;
11. Takes note with appreciation of the continued efforts of the Secretariat with Member States party to the 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;
12. Urges the Secretariat to further strengthen the IAEA-WHO partnership;
13. Requests the Secretariat to assist Member States upon request in their activities to mitigate the impact of female cancers with proper prevention, diagnosis and treatment mechanisms;
14. Encourages Member States to make use of the existing peer-review mechanisms in radiation medicine to strengthen quality diagnosis and patient treatment;
15. Calls for the support of the Agency in setting guidelines for the adoption of advanced techniques and equipment in radiation medicine in Member States;
16. Recognizes the success of the VETLAB Network of veterinary diagnostic laboratories in disseminating the use of nuclear techniques for the timely diagnosis, control and eradication of transboundary animal and zoonotic diseases such as Ebola virus disease, avian influenza and lumpy skin disease in Africa, Latin America and the Caribbean, Asia and Europe and urges the Secretariat to further increase these efforts as well as to expand and transfer these techniques to Member States;

17. Requests the Secretariat to continue to provide to interested Member States, upon request, technical assistance regarding production and transport of medical isotopes and radiopharmaceuticals;
18. 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;
19. 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 other international initiatives such as the High-level Group on the Security of Supply of Medical Radioisotopes established by the OECD Nuclear Energy Agency;
20. 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;
21. 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;
22. 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;
23. 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;
24. 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;
25. 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 and ICERRs, and further requests the Secretariat to facilitate safe, effective and sustainable operation of these facilities;
26. 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;

27. 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;

28. 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;

29. 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;

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

31. Recommends that the Secretariat report to the Board of Governors and to the General Conference at its sixty-third (2019) regular session on the progress made in the areas of nuclear science, technology and applications.

## 2.

### **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(60)/RES/12 on “Development of the sterile insect technique for the control or eradication of malaria-, dengue-, Zika- and other 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 well-being 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 3.2 billion people remain at risk of malaria, transmitted by mosquitos and that in 2016 alone, there were an estimated 216 million new cases of malaria and 445 000 deaths, mainly in Africa, thus constituting a major obstacle to poverty eradication 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 organized by the Agency and held in Vienna from 16 to 20 June 2014 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) Taking note of 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),

(p) Noting with appreciation the interest shown by some donors in and their support for R&D on the SIT for combating malaria-, dengue-, Zika- and other disease-transmitting mosquitoes, and

(q) 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(62)/4, Annex 3,

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 develop and transfer 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 currently expanded mosquito research programme, laboratory/office space and staffing;
5. Requests the Agency to strengthen capacity building and networking in Latin America, Asia and the Pacific, and Africa through regional TC projects and to support 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 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 genetic and environment-friendly methods;
7. Invites the Agency to review and update 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;
8. Invites the Agency to strengthen its collaboration with the WHO, and to provide guidance to field projects to assess entomological and epidemiological impacts;
9. Appreciates Member States for the continued support for the renovation of the new Insect Pest Control Laboratory in Seibersdorf;
10. 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

11. Requests the Director General to report on the progress made in the implementation of this resolution to the General Conference at its sixty-fourth session (2020).

**3.**

**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,
- (c) Recognizing that tsetse fly and trypanosomosis (T&T) control programmes 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 2 000 per year and are currently at the lowest level for several decades, animal trypanosomosis still affects millions of livestock every year and is a constraint to rural development for tens of millions of people in rural communities in 39 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 sterile insect technique (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 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 (SARD),
- (l) Welcoming the progress made in the Agency-supported tsetse eradication project in the Niayes Region of Senegal, which has improved food security and increased farmers' incomes in a highly cost-effective way, and further welcoming the establishment of a tsetse mass-rearing facility in Burkina Faso,
- (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 through the Peaceful Uses Initiative (PUI) in support of projects for T&T control in Senegal and Burkina Faso,
- (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) Welcoming the opening of the Insectary of Bobo-Dioulasso (IBD) under the Burkina Faso PATTEC project as a sub-regional centre for the production and distribution of tsetse flies for the SIT,
- (p) Acknowledging the good technical management at the IBD under the Burkina Faso PATTEC project, which has resulted in the expansion of the colony of one tsetse species above one million producing females,
- (q) Welcoming the efforts made by the Agency's Department of Technical Cooperation and the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture in support of AU-PATTEC,
- (r) 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, 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(62)/4, Annex 2,

1. Urges the Secretariat to further intensify the efforts in advocating at the national 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 techniques 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 Division 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;
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 T&T strategies and the cost-effective integration of SIT operations in AW-IPM campaigns;
8. Urges the Secretariat and other partners to continue capacity building and to explore the possibilities of private-public partnership for the establishment and operation of tsetse mass rearing centres for providing cost-effectively large numbers of sterile male flies to different 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 Division to continue to support sub-regional mass production and distribution of 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-third (2019) regular session.

4.

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

The General Conference,

- (a) Recalling resolution GC(60)/RES/12.A4, 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 Agenda 21 of the Rio Summit on Development and Environment, held in 1992, and 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,
- (c) 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,
- (d) 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,
- (e) Recognizing that a number of Member States have expressed their interest in participating in activities relating to seawater desalination using nuclear energy,
- (f) 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,
- (g) 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(62)/4,
- (h) 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,
- (i) Taking note of the technical meetings that were held in 2016, 2017 and 2018 to examine techno-economic aspects of cogeneration and socio-environmental effects towards mitigating climate change,
- (j) Taking note of the Technical Meeting that was held in 2017 to address the responsibilities of users and vendors including to establish a common understanding of

users' requirements and the terms under which vendors can supply suitable reactor designs and desalination technologies,

(k) Noting that the Secretariat has in 2017 issued two IAEA Nuclear Energy Series publications: NP-T-4.1 on "Opportunities for Cogeneration with Nuclear Energy" and NP-T-4.3 on "Industrial Applications of Nuclear Energy" to highlight nuclear cogeneration for various industrial applications, and noting the progress that has been made in developing guidance on nuclear energy cogeneration,

(l) Further noting the release of a new version of the Water Management Program in Nuclear Power Plants (WAMP) in January 2018,

(m) Noting that the Coordinated Research Project (CRP) on the Application of Advanced Low Temperature Desalination Systems to Support Nuclear Power Plants and Non-Electric Applications has progressed as planned with the final research coordinating meeting held in 2016,

(n) Recalling with appreciation that the Agency has established a programme to assist developing countries in addressing issues concerning economics, safety, reliability and technical measures for proliferation resistance in the application of small and medium-sized nuclear reactors (SMRs) for the production of potable water, and

(o) Taking note of the efforts of the Director General in soliciting additional funds for nuclear desalination,

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 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 cogeneration;

(b) Issue a technical report addressing responsibilities of vendors and users involved in nuclear desalination projects, and assessing different scenarios for cogeneration; and

(c) Continue to increase the Secretariat's activities in capacity building (including training and education) on nuclear desalination projects to bridge the gap among users/vendors/operators/regulators;

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-fourth (2020) regular session under an appropriate agenda item.

## **5.**

### **Strengthening the support to Member States in food and agriculture**

#### The General Conference,

- (a) Recalling its resolutions 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, 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 FAO publication "The State of Food Security and Nutrition in the World 2018", the number of chronically undernourished people in the world is estimated to have increased to 821 million, from 804 million in 2016, and that, while some regions continue to show overall progress, hunger remains an everyday challenge,
- (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 food security,
- (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) Appreciating the work of the Joint Division of the FAO and the IAEA in its dedication to the development and application of nuclear and related techniques in food and agriculture, and welcoming the reaffirmation of the commitment of both organizations to the long-standing partnership between the two organizations through the signing by the Agency and FAO in 2013 of revised arrangements regarding the work of the Joint FAO/IAEA Division,

- (i) Affirming the synergy and contribution of this unique partnership through the Joint FAO/IAEA Division to global food security and sustainable agriculture development,
- (j) Recalling the Strategic Framework of the FAO, which focuses on five Strategic Objectives and which streamlines priorities, results and resource allocation to accelerate the eradication of hunger, malnutrition, poverty and the sustainable use of natural resources,
- (k) 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 food traceability, authenticity and contaminant control; the investigation of irradiated animal vaccines; the development of radiation hybrid maps for animal breeding; the enhancement of animal disease diagnostic applications; and improving the efficiency of mutation induction techniques for crop improvement using modern biotechnologies,
- (l) 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,
- (m) Recognizing the importance of the Agency's Biosafety Level 3 (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) 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,
- (n) 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, bluetongue and lumpy skin disease in Africa, Asia, Europe, Latin America and the Caribbean,
- (o) 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,
- (p) Recognizing the success of the Veterinary Disease Diagnostic Laboratories Network (VETLAB Network), following the achievements of the African Rinderpest Laboratory Network developed by the Joint FAO/IAEA Division in the early 1990s covering 20 countries for the global rinderpest eradication campaign, in adapting its structure to accommodate most transboundary and zoonotic diseases and currently involving 44 African Member States plus 19 Asian Member States,
- (q) 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,
- (r) Noting recent successes resulting from the efforts made by the Secretariat in the development of new and improved crop varieties using nuclear techniques and biotechnologies, e.g. new rice and soybean mutant varieties in Indonesia adaptable to

climate change, improved sesame and cotton varieties adapted to high temperatures in Pakistan, and new groundnut varieties in Sri Lanka being disease resistant, drought tolerant and high-yield lines,

(s) Noting recent successes resulting from the efforts made by the Secretariat in development of climate-smart crop varieties using nuclear techniques and biotechnologies, e.g. improved rice mutant lines in Japan adaptable to low nitrogen conditions, improved wheat mutant varieties with high water use efficiency in China, improved barley mutant lines in Australia adaptable to low phosphorous fields, and improved mungbean mutant lines with early maturity in Thailand,

(t) 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,

(u) Commending the Secretariat on its continued efforts in development and application of nuclear and related analytical techniques to detect food residues/contaminants, 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,

(v) 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,

(w) 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,

(x) Noting the efforts by the Secretariat to build a network of national agriculture research systems in Asia Pacific 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,

(y) 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,

(z) Commending the Secretariat on its effective assistance to Member States in quickly and effectively identifying and characterizing transboundary animal and zoonotic diseases, such as Ebola, highly pathogenic avian influenza, Crimean-Congo haemorrhagic fever and Rift Valley fever,

(aa) Commending the Secretariat on its work on eradication of fruit flies in Latin America and the Caribbean using the 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,

- (bb) 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,
- (cc) Commending the Secretariat on the support to the development, reorganization and harmonization of a suite of fruit fly international standards 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, and appreciating the teamwork award from the FAO to the IPPC-Joint FAO/IAEA team,
- (dd) Appreciating the major achievement of the Joint FAO/IAEA Division and the Agency's Technical Cooperation programme in developing mutant wheat varieties with resistance to Ug99, a black stem rust disease of wheat,
- (ee) Commending the Agency and FAO on jointly providing Achievement Awards and Outstanding Achievement Awards to plant breeders and institutes in Member States for exceptional achievements in mutation breeding and their contributions to global food security,
- (ff) 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,
- (gg) 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,
- (hh) 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,
- (ii) Applauding the support of the Secretariat to 65 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,
- (jj) 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,

(kk) 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 Division to more than for 225 national, regional and interregional technical cooperation projects and 30 coordinated research projects, and

(ll) Appreciating the contributions made by Member States, the FAO and other stakeholders in support of the ReNuAL+ Project 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,

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 Division, 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 Division 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, 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, biotechnology and other modern technologies for marker development to assist and accelerate crop breeding;
6. Encourages the Joint FAO/IAEA Division 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 Division 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 Division to take

the lead in establishing, sustaining and managing such networks;

9. Furthermore, encourages the Joint FAO/IAEA Division 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 Tephritid Workers Database (TWD) Network and the Coffee Mutation Network (CMN), with the participation of multiple stakeholders to strengthen national programmes;

10. Further encourages the Joint FAO/IAEA Division to expand its support to Member States, through the VETLAB Network, in establishing and developing capabilities in diagnosing and responding to veterinary and zoonotic diseases, and acknowledges the efficient processes, which lead to quick 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 Division 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 potentially 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 strengthen capacity building for Member States to address these global threats;

14. Encourages the Joint FAO/IAEA Division, 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 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 emission;

18. Urges the Secretariat to further strengthen its efforts to seek extrabudgetary funding for infrastructure and equipment improvement and modernization of the Seibersdorf Laboratories, 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+ initiative;

19. Urges the Secretariat, in its resource mobilization efforts for the ReNuAL 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 Division 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-fourth (2020) regular session.

## **6.**

### **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 malaria-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 NA Laboratories at Seibersdorf are in urgent 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 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) Further welcoming the Director General's report in GOV/2018/29-GC(62)/4, Annex 5, to the Board of Governors on progress made in implementing the ReNuAL project since the 61st General Conference,

- (m) Welcoming progress made in the construction of the new laboratory buildings and infrastructure under both ReNuAL and ReNuAL+ and noting that the Insect Pest Control Laboratory (IPCL) was inaugurated on 25 September 2017; and that the IPCL and Dosimetry Laboratory are expected to be operational by the end of 2018,
- (n) Further welcoming the major construction of the Flexible Modular Laboratory (FML), which is expected to be completed by the end of 2018,
- (o) 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,
- (p) Welcoming that approximately €32 million in extrabudgetary funds have been raised for ReNuAL and ReNuAL+ to date, including over €11 million for ReNuAL+,
- (q) Further welcoming the financial and in-kind contributions and cost-free experts for the implementation of the ReNuAL project provided by the following 34 Member States: Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, India, Indonesia, Israel, Japan, Jordan, Kazakhstan, the Republic of Korea, Kuwait, Oman, Malaysia, Mongolia, Morocco, New Zealand, Norway, Pakistan, the Philippines, Qatar, the Russian Federation, Saudi Arabia, South Africa, Spain, Switzerland, Thailand, Turkey, the United Kingdom and the United States of America, and 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), one of the Agency's Collaborating Centres, as well as from five private contributors,
- (r) 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,
- (s) Noting the requirement for €3.75 million by 30 November 2018 to complete the integrated energy centre and to equip and set up the new laboratory buildings, in order to ensure full functionality on schedule,
- (t) Further noting the proposal in the 2019 Budget Update to allocate €2.1 million to ReNuAL+ from the Major Capital Investment Fund, and
- (u) 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,
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 within the overall funding target for the renovation project;
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 and 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 ReNuAL+, prioritizing the remaining elements ReNuAL+;
5. Encourages the Secretariat to carry out further planning on how to meet the requirements of laboratories that will remain in the existing facilities, once the FML has been completed;
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. 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 equipping and set up of the new laboratory buildings and integrated energy centre to ensure that they become fully operational and on schedule;
8. Further invites Member States, based on the information provided from the recent planning efforts of the Secretariat, to make the appropriate contributions to support the completion of the renovation of the NA Laboratories in Seibersdorf, as described in GOV/INF/2017/1, so that those elements within ReNuAL+ are implemented as soon as possible, in consultation with all Member States;
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 with the aim to have the new facilities operational by the end of 2019;
10. Calls on the Secretariat to report on the implementation of ReNuAL and ReNuAL+, with the aim of highlighting achievements and identifying outstanding resource requirements, at upcoming events such as the IAEA Ministerial Conference on Nuclear Science and Technology, scheduled to take place in November 2018; and
11. Requests the Director General to report on progress made in the implementation of this resolution to the General Conference at its sixty-third (2019) session.

## **B. Nuclear power applications**

### **1. General**

#### **1.1. Introduction**

##### The General Conference,

- (a) Recalling resolution GC(61)/RES/11 and previous General Conference resolutions on strengthening the Agency's activities related to nuclear science, technology and applications,
- (b) 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",
- (c) Noting also that the Agency's statutory functions include "to encourage and assist research on, 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", including the production of electric power, with due consideration for the needs of developing countries,
- (d) Recalling the importance of involving the Member States in the drafting and publication process of important publications on nuclear energy,
- (e) Noting the continued value of Integrated Work Plans (IWPs), which provide an operational framework for the delivery of optimized Agency assistance to support Member States with new and expanding nuclear programmes,
- (f) Acknowledging that actions have been taken by the Secretariat and Member States with nuclear power, drawing upon the lessons learned from the Fukushima Daiichi accident, endeavouring to enhance the robustness of nuclear power plants and fuel cycle facilities, as well as human and organizational effectiveness, and emphasizing the need for ensuring competent technical support at every stage of the lifetime of nuclear power plants and fuel cycle facilities for safe and reliable operations,
- (g) Recalling that launching new, as well as maintaining and expanding existing nuclear power programmes, require 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, as well as a strong and long-term commitment of national authorities to creating and maintaining this infrastructure,
- (h) Recognizing the growing interest within a number of Member States in next generation reactor designs,
- (i) Recalling that the development of innovative fast reactors, closed fuel cycles and alternative fuel cycles (e.g. thorium, recycled uranium and plutonium) may be regarded as steps toward future sustainable and safe nuclear power that can extend the lifetime of

nuclear fuel resources and be an effective solution for the management of radioactive waste and spent fuel,

(j) Recognizing that the establishment of a robust safety, security and non-proliferation infrastructure in States considering introducing nuclear reactors is vital for any nuclear programme, and 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,

(k) 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,

(l) 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 importance of active stakeholder involvement in the development or expansion of nuclear power programmes; noting the Agency's efforts to enhance its work in the stakeholder involvement and public information and welcoming the publication of a Safety Guide on Communication and Consultation with Interested Parties by the Regulatory Body,

(m) Recalling the importance of human resource development, education and training, knowledge management and promoting gender equality and diversity, encouraging the Agency to work with the OECD/NEA on these issues, and 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,

(n) Recognizing the importance and ongoing need to strengthen management competencies in the nuclear sector, especially in developing countries embarking on or expanding nuclear power programmes, and commending the Agency's successful facilitation of university implemented master's programmes in nuclear technology management (NTM) through the collaboration framework of the International Nuclear Management Academy (INMA),

(o) 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 needs to be addressed in a holistic manner in order to promote access to competitive, clean safe, secure and affordable energy, so as to support sustainable economic growth in all Member States,

(p) Taking note 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,

(q) Noting the launch of the Nuclear Innovation: Clean Energy Future initiative (NICE Future) under the Clean Energy Ministerial, which recognizes the value of involving nuclear in broader, high level clean energy and climate discussions, as well as exploration under the initiative of the role of new nuclear technologies in increasing grid flexibility and reliability while creating opportunities to use process heat and heat that is traditionally

lost in power conversion in applications such as desalination, industrial and chemical processes and district heating,

(r) 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 to use diverse portfolios of energy sources in order to achieve its energy security, while also working to address climate change, including, as applicable, through actions under the Paris Agreement adopted on 12 December 2015,

(s) 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,

(t) 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,

(u) Acknowledging the potential advantages offered by small and medium-sized or modular reactors (SMRs), recognizing that SMRs could be well-suited to small electrical grids, including in developing Member States, and could play a significant role in district heating, supply of industrial heat, desalination and hydrogen production systems in the future, and their potential for use in innovative energy systems and highlighting the establishment of the Technical Working Group on SMRs (TWG-SMRs),

(v) 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 all levels and confirming the important role of nuclear knowledge management programmes in strengthening nuclear education, training and networking capabilities,

(w) Acknowledging the increasing regional demand for the Agency's Nuclear Energy Management School and its positive impact on enhancing awareness and understanding of nuclear sector issues and challenges among future nuclear professionals and managers,

(x) Calling attention to the long-term benefit of implementing effective and targeted capacity building to support national plans to implement new or expanding nuclear power programmes, especially in developing countries, and

(y) Taking note of the Nuclear Technology Review 2018 (GC(62)/INF/2), as well as of the report Strengthening the Agency's Activities related to Nuclear Science, Technology and Applications (GOV/2018/29-GC(62)/4) prepared by the Secretariat,

1. Affirms the importance of the role of the Agency in facilitating through international cooperation among interested Member States, the development and use of nuclear energy for peaceful purposes, including the specific application of the generation of electric power, in assisting these States in that regard, in fostering international cooperation and in disseminating to the public well-balanced information on nuclear energy;

2. 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;

3. Encourages Member States to develop programmes and initiatives in close coordination with the Agency, to improve and promote Member States' expertise;
4. Encourages the Secretariat to support regional technical cooperation projects for initiatives in the areas of knowledge management, including support for the implementation of national level Education Capability Assessment and Planning missions and initiatives, programmes to foster and strengthen university collaboration in nuclear research, the development of e-learning resources and support for e-learning platforms, and flexible student fellowships to support nuclear professionals from developing countries to participate in and to complete INMA-endorsed university master's programmes in NTM;
5. Urges the Secretariat to support participation in regional Nuclear Energy Management (NEM) Schools for qualified students, in particular those from developing countries through regional funding of technical cooperation fellowships;
6. Commends the Agency for the assistance and review services for Member States embarking on a nuclear power programmes or expanding such programmes and encourages Member States to voluntarily use this assistance and the Agency's review services when planning and assessing the economics/socio-economics of their energy programmes, developing their national infrastructures for nuclear power and defining their long-term strategies for sustainable nuclear energy;
7. Requests the Secretariat to initiate a programme to explore new ways to foster international partnerships, investment and collaboration that does not duplicate existing Agency efforts or those undertaken by other relevant multilateral fora, is inclusive of developing countries and is focused on innovation through joint international research and development in advanced nuclear power technologies and alternative non-electric nuclear energy systems and their applications that will significantly contribute to attaining the SDGs in a responsible, safe, secure and economically sound manner that enhances proliferation resistance;
8. Requests the Secretariat to provide an update, at the earliest opportunity, of the technical document (TECDOC) on managing suspect and counterfeit items in the nuclear industry and encourages Member States to consider making use of the document once it is published;
9. Welcomes the recent effort of the Secretariat to introduce mechanisms for Member States to participate in the preparation of NE Series publications and its intention to share information on drafts under preparation, calls on the Secretariat to make these mechanisms fully functional and further encourages the Secretariat to consider utilizing the Technical Working Groups (TWGs) as review committees in a more systematic way, and to report to the Member States on this matter;
10. Encourages the Secretariat to improve the timeliness of information available during the publication process, to pursue its efforts in reducing the number of finalized but unpublished documents, and to promote the systematic review of old publications and indicate when publications are superseded as appropriate;
11. Encourages the Secretariat to reorganize NE Series documents by topic and clearly mark which publications are most current and which have been superseded, in order to enhance accessibility and navigation among these documents;
12. Requests the Secretariat, in completing the new IAEA website, to ensure that information is preserved and made easily accessible to all stakeholders, including both policy makers and experts;

13. Takes note of the success of the 4th International Ministerial Conference on Nuclear Power in the 21st Century, organized by the Agency and hosted by the United Arab Emirates in Abu Dhabi in October/November 2017, where one of the key messages was that for many countries, nuclear power will have an important role to play in achieving the SDGs and meeting the targets in the Paris Agreement, and requests the Secretariat to initiate preparation of the next such ministerial conference;
14. Notes the preparation by the Secretariat of the International Conference on Climate Change and the Role of Nuclear Power, to be held in October 2019, in Vienna;
15. Encourages the Agency to continue to organize capacity building workshops for senior management to enhance their understanding and execution of their leadership role and responsibility for management systems to ensure the safety, security, effectiveness and sustainability of nuclear power programmes;
16. 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 involvement and public information as well as organizing conferences, technical meetings and workshops in this regard;
17. Acknowledges the importance of the Agency's technical cooperation projects for assisting Member States in energy analysis and planning, 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 notes the importance of active stakeholder involvement in the development or expansion of nuclear power programmes;
18. Encourages the Secretariat to continue to enhance interested Member States' understanding of funding requirements for nuclear power infrastructure development and potential approaches to financing nuclear power programmes, including management of radioactive waste and spent fuel in a changing international financial landscape, 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;
19. Encourages the Secretariat to analyse the technical and economic cost drivers for economic sustainability of nuclear power operation, especially in the scope of life extension, to determine the value of nuclear power in the energy mix considering environmental conditions;
20. Encourages the Secretariat to reshape the annual publication Energy, Electricity and Nuclear Power Estimates for the Period up to 2050, Reference Data Series No. 1, in order to better describe the plausible development of new nuclear power plants in different world regions whatever the scenario taken into account, and invites willing Member States to support the Secretariat with the promotion of this publication;
21. Requests the Secretariat to continue to pursue, in consultation with interested Member States, the Agency's activities in the areas of nuclear science and technology for nuclear power applications in Member States, with a view to strengthening infrastructures, including safety and security, and fostering science, technology and engineering, including capacity building via the utilization of existing research reactors;
22. Stresses the importance, when planning and deploying nuclear energy, including nuclear power and related fuel cycle activities, of ensuring the highest standards of safety and emergency

preparedness and response, security, non-proliferation, and environmental protection, for example through the promotion of a platform for the international nuclear community to continuously exchange information on R&D addressing safety issues highlighted by the Fukushima Daiichi accident, as well as the strengthening of long-term research programmes to learn about severe accidents and related decommissioning activities;

23. 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;

24. 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;

25. Requests that the actions of the Secretariat called for in this resolution be undertaken as a priority subject to the availability of resources; and

26. Requests the Secretariat to report to the Board of Governors as appropriate and to the General Conference at its sixty-third (2019) session on developments relevant to this resolution;

## **1.2. Nuclear fuel cycle and waste management**

(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, and underlining the necessity to support uranium mine remediation, as part of a sustainable nuclear programme,

(c) Recalling the organization by the Secretariat of the 4th International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM 2018), which took place from 25–29 June 2018,

(d) Recalling the opening of the Low Enriched Uranium (LEU) Bank Storage Facility on 29 August 2017, in Oskemen, Kazakhstan, and the signing of a Transit Agreement between the Agency and the Russian Federation and the signing of a Transit Agreement between the Agency and China to support the implementation of the LEU Bank,

(e) Welcoming the Secretariat's effort to ensure a fair LEU acquisition process for the LEU Bank,

(f) Noting also the functioning of the LEU Guaranteed Reserve in Angarsk, Russian Federation, comprising 120 tons of LEU under the aegis of the Agency,

(g) 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,

- (h) 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, as far as is compatible with the safe management of such material, 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,
- (i) Stressing the importance of Agency safety standards related to the management of radioactive waste and spent fuel and the benefits of strong cooperation with international organizations, and commending the TECDOCs published by the Department of Nuclear Energy intended to support their implementation,
- (j) 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, decommissioning and remediation, in a safe, secure and sustainable manner, and confirming the important role of science and technology in continuously addressing these challenges, particularly through innovations,
- (k) Recognizing the continuing efforts and good progress that have been made on the Fukushima Daiichi site, whilst noting the important and complex decommissioning, environmental remediation and radioactive waste management challenges that remain,
- (l) Recognizing that the growing number of shutdown reactors increases the need for developing adequate methods and techniques for decommissioning, environmental remediation and managing large volumes of radioactive waste, including contaminated water, resulting from the decommissioning of facilities, legacy practices and radiological or nuclear accidents and sharing lessons learned in that regard,
- (m) Acknowledging progress made in the field of deep geological disposal of both spent fuel and high level radioactive waste, and further acknowledging the vital importance of involving national authorities, including regulatory bodies, in order to enhance stakeholder engagement,
- (n) 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,
- (o) 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 acknowledging Canadian funding to enable borehole pilot projects being implemented in Ghana, the Philippines and Malaysia, and
- (p) Welcoming the introduction of and the completion of the first Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Radiation (ARTEMIS) peer reviews 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 develop and maintain sustainable activities through appropriate technology, infrastructure and stakeholder involvement and the development of skilled human resources and encourages the Agency to cooperate with the OECD/NEA for the publication of the 27th edition of the 'Red Book' on Uranium: Resources, Production and Demand;

2. Encourages the Agency to develop a guidance document with a step by step approach for countries considering or initiating a uranium production programme, based on the analysis and promotion of practical know how and innovative knowledge regarding environmental aspects of uranium exploration, mining and site remediation, and encourages interested Member States to use the uranium production site appraisal team (UPSAT) missions which support Member States in this field;
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 under accident conditions, for instance through Coordinated Research Projects;
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. Welcomes the Secretariat's effort to ensure a fair LEU acquisition process for the LEU Bank;
7. Encourages discussion among interested Member States on the development of multilateral approaches to the nuclear fuel cycle, including on the one hand possibilities of creating mechanisms for assurance for nuclear fuel supply and on the other hand possible schemes for the back end of the fuel cycle, 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. Highlights the organization by the Secretariat of the International Conference on the Management of Spent Fuel from Nuclear Power Reactors: Learning from the Past, Enabling the Future, to be held in June 2019;
9. 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, including those embarking on nuclear power programmes, to develop and implement adequate disposal programmes, in accordance with relevant safety standards and security guidance;
10. Supports Member States in the adoption of best practices for managing NORM residue/wastes (including inventory determination, reuse, recycle, storage and disposal options) and to remediate NORM contaminated sites;
11. Encourages the Secretariat to promote information sharing to better integrate approaches to the back end of the fuel cycle that impact irretrievability, transport, storage and recycling of spent fuel, for example through the coordination of research projects and to provide more information on designing, constructing, operating and closing a radioactive waste disposal facility, 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;
12. Encourages the Secretariat to continue its activities on 'Status and Trends of 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;

13. Requests the Agency, through its new Decommissioning and Environmental Remediation Section, to formulate guidance documents on decommissioning and action plans to support decommissioning, inter alia by establishing an international cooperation framework for implementation 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 Agency to further strengthen its activities in the area of environmental remediation, in close collaboration with the Department of Nuclear Safety and Security;

15. Encourages the Secretariat to further promote the ARTEMIS peer review service concept, explaining its benefits as a means of encouraging Member States to invite such peer reviews where appropriate, through cooperation between the Department of Nuclear Energy and the Department of Nuclear Safety and Security;

16. Encourages further strengthening of Agency safety standards as well as strong cooperation with international and regional organizations, such as through the Net-Enabled Waste Management Database and through the new joint reporting tool SWIFT (Spent Fuel and Radioactive Waste Information Tool); and

17. Encourages the Agency to further strengthen its activities in support of the effective management of disused sealed radioactive sources (DSRS) through support to field operations and capacity building for characterization, dismantling, packaging for storage or transport through the development of Qualified Technical Centres for DSRS management and through the fostering of cooperative efforts to further strengthen the supporting information on the borehole disposal of DSRS, with a view to enhancing safety and security of DSRS in the long term;

### **1.3. Research reactors**

(a) Recalling the conversion of the Miniature Neutron Source Reactor (MNSR) in Ghana from highly enriched uranium (HEU) fuel to LEU fuel and the removal of the HEU from Ghana to China, which has been completed by China, the United States of America, the IAEA and the host country Ghana, in 2017,

(b) 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

(c) Commending the Secretariat for the continued support provided for the implementation and promotion of the International Centres based on Research Reactors (ICERR) and acknowledging the establishment of the ICERR-Net cooperation network,

1. Encourages the Secretariat to continue to foster regional and international collaboration and networking that expands access to research reactors, such as international user communities;

2. 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,

environmental protection, and waste management associated with such reactors, and, on request, to assist decision makers in pursuing new reactor projects following the Agency-developed Specific Considerations and Milestones for a Research Reactor Project systematically and on the basis of a robust, utilization-based strategic plan;

3. 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 both new and older research reactors, to ensure continuous improvements in safety and reliability, sustainable long-term operation, the sustainability of fuel supply, and the exploration of efficient and effective disposition options for spent fuel and waste management and the development of a knowledgeable customer capability in Member States decommissioning research reactors;

4. Acknowledges the implementation of an Operations and Maintenance Assessment for Research Reactors (OMARR) mission in Uzbekistan, and encourages Member States to make further use of this IAEA service;

5. 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;

6. Encourages the Secretariat to further strengthen its efforts to support capacity building based on research reactors, including with the IAEA Internet Reactor Laboratory project;

7. Welcomes the start of the conversion of the miniature neutron source research reactor in the Republic of Nigeria from HEU fuel to LEU fuel, and the removal of the HEU from Nigeria to China, which is being implemented by the United States of America, China, the IAEA and the host country Nigeria, with technical, financial and/or in-kind assistance made by the United Kingdom, Norway and China and 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; and

8. Requests the Secretariat to report to the Board of Governors as appropriate and to the General Conference at its sixty-third (2019) session on developments relevant to this resolution.

## **2.**

### **Communication and IAEA cooperation with other agencies**

#### The General Conference,

(a) 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), and

(b) Commending the proactive approach of the Secretariat to identify relevant areas of activities among the 17 SDGs adopted by the United Nations in 2015,

1. 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;

2. Encourages 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, in advance of COP 24 to be held in Katowice, Poland, in December 2018, and encourages the Secretariat to work directly with Member States upon request and to continue to extend its activities in these areas, including the Paris Agreement;
3. Encourages the Agency to consider senior level representation at COP 24 and other major international forums where climate change and the potential role of nuclear power may be discussed; and to continue its efforts in identifying how nuclear energy could assist interested Member States in achieving the SDGs;
4. Encourages strengthening 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/NEA and the World Association of Nuclear Operators (WANO); and
5. Takes note of the Secretariat's cooperation with the International Framework for Nuclear Energy Cooperation (IFNEC), in areas of nuclear infrastructure, the back end of the nuclear fuel cycle and sustainable delivery chains.

### 3. 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, inter alia through the Nuclear Operator Organization Cooperation Forum held during regular sessions of the General Conference, while recognizing both the role of international organizations such as the OECD/NEA, and multinational networks among operators, such as WANO, and the need to further strengthen the cooperation between the Agency and these organizations,
- (b) Noting the growing importance 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,
- (c) Recognizing the 4th International Conference on Nuclear Power Plant Life Management (PLiM), which took place in France, in October 2017,
- (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 improvements, effective management of radioactive waste and spent fuel and decommissioning through focusing on the optimization of training programmes for operating organizations, and

(e) Recognizing the establishment of the TWG on Nuclear Power Plant Operations (TWG-NPPOPS),

1. Requests the Secretariat to promote collaboration among interested Member States for strengthening excellence in nuclear power plant operation and to establish effective collaboration mechanisms such as TWGs for safe, secure, efficient and sustainable operation of nuclear power plants and also for application of management systems in the nuclear industry to exchange information on relevant experiences and good practices in safe and effective nuclear power plant operation;
2. 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;
3. Encourages the Secretariat to disseminate best practices and experience through the publication of TECDOCs with respect to learning and development, leadership, safety culture and security culture, organizational culture, stakeholder involvement, decision-making and management, for the whole life cycle of facilities and activities, including the need to maintain an appropriate organizational structure while nuclear power plants are in permanent shutdown, or in transition to decommissioning;
4. 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;
5. Recognizes the need to enhance further 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;
6. Encourages the Secretariat to identify and promote best practices and lessons learned, through NE Series publications TECDOCs, with respect to procurement and supply chain issues, including bidding and contract evaluation processes, and also to support experience sharing related to quality control and quality surveillance activities related to nuclear construction, component manufacturing, and modifications, with respect to fitness for service issues and independent nuclear training accreditation;
7. 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; and
8. Requests the Secretariat to support Member States involved with nuclear power, which needs a knowledgeable workforce, and welcomes the Third International Conference on Human Resource Development for Nuclear Power Programmes: Meeting Challenges to Ensure Future Nuclear Workforce Capability, which was held in Gyeongju, Republic of Korea, from 28–31 May 2018.

4.

**Agency activities in the development of innovative nuclear technology**

The General Conference,

- (a) Recalling its previous resolutions on the Agency's activities in the development of innovative nuclear technology,
- (b) Conscious of the need for sustainable development and of the potential contribution of nuclear power to meet the growing energy needs in the 21st century and mitigating climate change,
- (c) Highlighting the need for an effective and efficient transition from the R&D and innovation stage to proven technology stage,
- (d) 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,
- (e) Noting that the membership of the Agency's International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO), which was launched in 2000, is continuing to grow and now comprises 42 Member States and the European Commission,
- (f) Noting also that the Agency fosters collaboration among interested Member States on selected innovative technologies and approaches to nuclear power through INPRO Collaborative Projects, TWGs working on facilitating innovations or advanced reactors and nuclear fuel cycle options, and Coordinated Research Projects, and acknowledging that the coordination of INPRO-related activities is achieved through the Agency's Programme and Budget and the INPRO Subprogramme Plan,
- (g) Noting that the INPRO Subprogramme Plan identifies activities in areas of global and regional nuclear energy scenarios, innovations in nuclear technology and institutional arrangements including such key collaborative projects as Roadmaps for a Transition to Globally Sustainable Nuclear Energy Systems (ROADMAPS), the project on Comparative Evaluation of Nuclear Energy System Options (CENESO), the project on Cooperative Approaches to the Back End of the Nuclear Fuel Cycle: Drivers and Legal, Institutional and Financial Impediments and other collaborative projects on specific issues of interest related to innovative nuclear reactor and fuel cycle concepts and designs,
- (h) 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 and regional training on nuclear energy system modelling, including collaborative scenarios, and the new INPRO service on Scenario Analysis and Decision Support for Development of Nuclear Energy Systems with Enhanced Sustainability,
- (i) Noting with appreciation that INPRO has successfully completed the collaborative project on Key Indicators for Innovative Nuclear Energy Systems (KIND) and received content approval for the final report of the Secretariat,
- (j) Noting that the INPRO Secretariat has drafted the final report of the collaborative project on ROADMAPS,

- (k) Noting the publication of an IAEA TECDOC on Experience in Modelling Nuclear Energy Systems with MESSAGE: Country Case Studies, and that INPRO Section is using it as a reference document in learning and training activities,
- (l) Noting that within the on-going collaborative ROADMAPS project, INPRO has developed a template comprising structural elements, linked by a common logic and allowing for the characterization of the current situation through the NESAs and plans for its development from a short-, medium- and long-term perspective, indicating the opportunities for saving time, effort and resources for improving characteristics of a national NESAs through international cooperation,
- (m) Noting the progress of other national, bilateral and international activities and initiatives, and their contributions to joint research and development work on innovative approaches to nuclear energy deployment and operation,
- (n) Recognizing that a number of Member States are planning to license, construct and operate prototypes or demonstrations of fast neutron systems, high temperature reactors, thermonuclear experimental reactors and other innovative reactors and integrated systems within the next decades, and encouraging the Secretariat to foster this process 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,
- (o) Noting the increased interest in technology developments in the area of molten salt and molten-salt cooled advanced reactors, and
- (p) Noting with appreciation the Director General's report on Agency activities in the development of innovative nuclear technology contained in document GOV/2018/29-GC(62)/4,
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, coordinate and integrate the services it provides to Member States, including broad energy planning and long-term nuclear energy planning, economic analysis and technico-economic assessments, NESAs and comparative evaluations of nuclear energy system and scenario options for transition to sustainable nuclear energy systems using, inter alia, the analytical approaches and tools developed by INPRO;
  4. Encourages the Secretariat to consider further implementation of on-line conferences for interested Member States, based on distance communication systems and national and regional training workshops, so that they may support the application of the analytical framework for modelling and assessment of 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 and the Secretariat to apply the ROADMAPS template for national case studies on options for achieving a Transition to Globally Sustainable Nuclear Energy Systems, including case studies based on cooperation among technology holder and technology user countries; and encourages the Secretariat to promote further application of the template developed within the ROADMAPS collaborative to perform national and regional long-term energy planning (towards enhanced sustainability of nuclear energy systems);
6. 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;
7. 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 to support decision analysis and prioritization in national nuclear energy programmes;
8. 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;
9. 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;
10. 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;
11. 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;
12. Encourages the Secretariat and interested Member States to complete the revision of the INPRO methodology, taking into account the results of NESAs performed in Member States and lessons learned from the Fukushima Daiichi accident, while noting updates to the INPRO manuals dealing with infrastructure, economics, depletion of resources and environmental stressors;
13. Recognizes ongoing efforts by the Secretariat and interested Member States to conduct comprehensive case studies for deployment of factory-fuelled small modular reactors as follow on to the already published preliminary study on transportable nuclear power plants (TNPPs);

14. Takes note that there are ongoing projects to construct and deploy TNPPs and SMRs and requests that the Secretariat holds a comprehensive briefing on all their work on TNPPs in the fourth quarter of 2018;
15. Recommends that the Secretariat continue to explore opportunities for synergy between the Agency's activities (including 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, appropriate TWGs, the Generation IV International Forum (GIF), the IFNEC, the European Sustainable Nuclear Industrial Initiative (ESNII) and the International Thermonuclear Experimental Reactor (ITER) with regard to innovative and advanced nuclear energy systems;
16. Invites interested Member States that have not done so to consider joining INPRO and to contribute to innovative nuclear technology activities by providing scientific and technical information, financial support, or technical and other relevant experts and by contributing to joint collaborative projects on innovative nuclear energy systems;
17. Encourages the Secretariat to continue, through the consolidation of available resources and additional assistance from interested Member States, regular training and workshops 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;
18. 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 constructed, for development of innovative nuclear technologies;
19. 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 enhanced proliferation resistance, including those needed 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, inter alia, economic, safety and security factors;
20. Recommends that the Secretariat continue to explore, in consultation with interested Member States, activities in the areas of innovative nuclear technologies, such as alternative fuel cycles (e.g. thorium, recycled uranium and plutonium) and Generation IV nuclear energy systems including fast neutron systems, supercritical water-cooled, high-temperature gas cooled and molten salt nuclear reactors, with a view to strengthening infrastructure, safety and security, fostering science, technology, engineering and capacity building via the utilization of existing and planned experimental facilities and material test reactors, and with a view to strengthening the efforts aimed at creating an adequate and harmonized regulatory framework so as to facilitate the licensing, construction and operation of these innovative reactors;
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; and
22. 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-third (2019) regular session under an appropriate agenda item.

## 5.

**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, especially for countries that are considering and planning for the introduction of nuclear power, as well as for countries expanding their nuclear power programme,
- (b) Recalling its previous resolutions on approaches to supporting nuclear power infrastructure development,
- (c) Stressing that primary responsibility for nuclear safety and security rests with States and their regulatory agencies, licensees and operating organizations in order to achieve the protection of the public and environment, and that a strong infrastructure is necessary to execute this responsibility,
- (d) 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 with assessments of infrastructure needs, taking into account relevant economic, social and policy considerations, to support the safe, secure and efficient use of nuclear power, and noting the Agency's increasing activities in this area, in accordance with the requests of Member States,
- (e) Noting the Secretariat's effort to provide support in the area of stakeholder involvement, which continues to be of utmost importance to Member States that are considering and planning for the introduction of nuclear power,
- (f) 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, and welcoming the Agency's efforts to share lessons learned from these missions,
- (g) Noting the 26 INIR and follow-up INIR missions performed since 2009 at the request of 16 Member States, and further noting that additional countries considering embarking on or expanding a nuclear power programme are considering requesting INIR missions,
- (h) Recognizing the activities undertaken by the Secretariat, with input from all relevant Departments, to finalize the development of the evaluation methodology for Phase 3 (before commissioning) INIR missions, with interested embarking or expanding Member States close to commissioning,
- (i) Noting the publication of Nuclear Energy Series reports and the organization of a wide range of conferences, technical meetings and workshops on topics related to infrastructure development,

- (j) Recognizing as effective platforms for leadership development the NEM School and other training courses on management and leadership and on construction management, and mentoring programmes implemented under the Agency's auspices,
- (k) Noting the importance of coordination of activities within the Agency for nuclear infrastructure development, through the Nuclear Power Support Group, the Infrastructure Coordination Group and the respective Core Teams established to support each specific Member State considering and planning the introduction of nuclear power, or the expansion of their existing nuclear power programme,
- (l) 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,
- (m) Noting the Agency's efforts in developing innovative infrastructure approaches for future nuclear energy systems,
- (n) Commending the TWG on Nuclear Power Infrastructure that provides guidance to the Agency on approaches, strategy, policy and implementing actions for the establishment of a national nuclear power programme,
- (o) Welcoming the Secretariat's efforts in the production of a series of e-learning modules, based on the 19 infrastructure issues defined by the Agency's Milestones approach, of which 17 have already been released on-line, supporting capacity building in both countries embarking on new nuclear programmes and countries expanding their nuclear programmes,
- (p) Recognizing the importance of encouraging effective workforce planning for operating and expanding nuclear power programmes, worldwide, and the increasing need for trained personnel,
- (q) Taking note of other international initiatives focusing on support for infrastructure development, and
- (r) Recognizing the growing interest of Member States in Agency's training on the reactor technology assessment methodology for near term deployment to embarking or expanding countries within the Milestone approach, and noting the increasing number of requests from embarking Member States for training courses and workshops on the Agency's reactor technology assessment methodology for near term deployment,
1. Commends the Director General and the Secretariat for their efforts in implementing resolution GC(61)/RES/11.B.5 as reported in document GC(62)/4;
  2. 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;
  3. Encourages the Secretariat to facilitate broad international participation at all technical meetings, workshops, training courses and conferences on nuclear infrastructure development sponsored by in kind support from Member States;

4. Emphasises 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;
5. Encourages Member States embarking on nuclear power programmes to conduct a self-evaluation based on IAEA Nuclear Energy Series No. NG-T-3.2 (Rev. 1) to identify gaps in their national nuclear infrastructure and to invite an INIR mission and relevant peer review missions, including site design safety reviews, prior to commissioning the first nuclear power plant, and to make public their INIR mission reports in order to promote transparency and to share best practices;
6. Requests the Secretariat to consolidate the application of the Milestones approach (IAEA Nuclear Energy Series No. NG-G-3.1 (Rev. 1), 2015) across the Agency as the leading document for the use of Member States in the development of new nuclear power programmes and in the establishment of corresponding IWPs;
7. Invites Member States to make use of INIR follow-up missions to assess progress and determine whether recommendations and suggestions were successfully implemented;
8. Requests the Secretariat to continue to learn lessons from INIR missions and to enhance the effectiveness of such INIR activities;
9. Urges Member States to develop and keep updated Action Plans to address the recommendations and suggestions provided by the INIR missions and encourages them to participate in the development and updating of their Member State-specific IWPs;
10. Welcomes the pilot INIR Phase 3 conducted by the Agency at the request of the United Arab Emirates, and encourages other embarking or expanding Member States in Phase 3 to request an INIR Phase 3 mission at the appropriate time;
11. 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 as a working language, while ensuring that the use of such experts does not constitute a conflict of interest or convey commercial advantage;
12. Encourages the activities undertaken by the Secretariat to promote cooperation between embarking countries and those with established nuclear power programmes;
13. Encourages Member States to use the competency framework and requests the Secretariat to continue to update the nuclear infrastructure bibliography, as a useful tool to help Member States plan technical cooperation and other assistance;
14. Encourages the Secretariat to continue to strengthen training related to the development of a knowledgeable future owner/operator;
15. 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;
16. Encourages the Secretariat to facilitate, where possible, ‘soft coordination’ among Member States for the more efficient implementation of multilateral and bilateral assistance to countries considering or planning for the introduction or expansion of nuclear power, provided it avoids all conflict of interest and excludes areas which are commercially sensitive;

17. Welcomes the activities undertaken by Member States, both individually and collectively, to cooperate on a voluntary basis in nuclear infrastructure development and encourages further such cooperation;
18. Welcomes the extra budgetary funds provided to the Secretariat's activities for the infrastructure development support to Member States 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;
19. Encourages the Secretariat to update the reactor technology assessment methodology to incorporate the lessons learned in five 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;
20. Encourages the Secretariat to work with Member States that are providing financial support for training courses on nuclear infrastructure development in order to streamline and reduce overlap and duplication in such courses; and
21. 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-third (2019) session under an appropriate agenda item.

## **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) Aware of continuing concerns about risks of knowledge loss for operating facilities,
- (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 Agency's Green Frontiers Initiative, which promotes and fosters university-driven research and development cooperation with national labs, research reactors and industry, as well as the Agency's Knowledge Incubation Centres for Science and Technology Adoption, Resourcing and Transfer, which disseminate best practice in creating and growing university technology incubation centres and promote nuclear research and development investment,
- (q) Noting the efforts of the OECD/NEA in establishing 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,
- (r) Noting the success of the Nuclear Energy Management (NEM) School and the Nuclear Knowledge Management (NKM) School, both held annually at the International Centre for Theoretical Physics (ICTP) in Trieste and the highly-valued continuous cooperation between the IAEA and the ICTP, and
- (s) Further noting the sustainable outcomes of the regional NEM Schools held in the UAE in May 2017, in Japan in July 2017, in the Russian Federation in September 2017

and in May and September 2018, and in South Africa in November 2017, 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 the activities of the regional networks in Asia (ANENT), Latin America (LANENT) and Africa (AFRA-NEST), and Eastern Europe and Central Asia (STAR-NET);
  - 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. 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 on a regional basis;
  - v. 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;
  - vi. 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 the further development and effective use of the IAEA's CLP4NET and CONNECT platforms as e-learning repositories; and
  - vii. 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;
8. Acknowledges the achievements of the Third International Conference on Nuclear Knowledge Management — Challenges and Approaches, held in November 2016, in promoting the sharing of experience and solutions between operating and newcomer countries, looks forward to the Fourth International Conference on Nuclear Knowledge Management to be held in 2020, and requests that the Secretariat continue to develop tools and services in the area of human resources development 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. Encourages the Secretariat to continue to facilitate the establishment of 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;
11. 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
12. 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-fourth (2020) session under an appropriate agenda item.

*20 September 2018  
Agenda item 15  
GC(62)/OR.7, para. 165*

**GC(62)/RES/10**

**Strengthening the Effectiveness and Improving the Efficiency of Agency Safeguards**

The General Conference,

- (a) Recalling resolution GC(61)/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 party 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 2017,
- (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) 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,
- (j) Stressing the importance of the Model Additional Protocol approved on 15 May 1997 by the Board of Governors aimed at strengthening the effectiveness and improving the efficiency of Agency safeguards,
- (k) 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,
- (l) 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,
- (m) 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,

- (n) 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,
- (o) 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,
- (p) Welcoming the work the Agency has undertaken in verifying nuclear material from dismantled nuclear weapons,
- (q) 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,
- (r) 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,
- (s) Recognizing that the Agency's safeguards implementation is continually reviewed and evaluated by the Agency,
- (t) 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,
- (u) 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,
- (v) 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,
- (w) 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,
- (x) 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,

(y) 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

(z) 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. Emphasizes the obligation of States to cooperate with the Agency in order to facilitate the implementation of safeguards agreements;
4. Stresses the importance of States complying fully with their safeguards obligations;
5. 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;
6. Regrets that not all State parties to the NPT obligated to do so have concluded comprehensive safeguards agreements with the Agency;
7. 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;
8. 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;
9. 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;
10. Calls on all States with unmodified SQPs to either rescind or amend their respective SQPs as soon as their legal and constitutional requirements allow, 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);

11. Welcomes the fact that, as of 21 September 2018, 57 States have accepted SQPs in accordance with the modified text endorsed by the Board of Governors;
12. Welcomes the fact that, as of 21 September 2018, 148 States and other parties to safeguards agreements have signed additional protocols, and that additional protocols are in force for 133 of those States and other parties;
13. 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;
14. 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;
15. 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;
16. 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;
17. 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 2018), 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;
18. 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;
19. Invites the nuclear-weapon States to keep the scope of their additional protocols under review;
20. 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;
21. Notes that for 2017 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 70 States that have both a comprehensive safeguards agreement and additional protocol in force;
22. 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;

23. 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;

24. 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;

25. Notes the Secretariat's intention to continue to concentrate its verification effort on the sensitive stages of the nuclear fuel cycle;

26. 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;

27. 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;

28. 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;

29. 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,

30. 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 SLAs 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;
31. 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;
32. 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;
33. 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;
34. 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;
35. 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;
36. 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;
37. Encourages States to support the Agency's efforts to strengthen the Safeguards Analytical Laboratories and the Network of Analytical Laboratories, especially in developing countries;
38. Welcomes the steps taken by the Director General to protect classified safeguards information as described in document GC(62)/8, 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;
39. 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;

40. 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

41. Requests the Director General to report on the implementation of this resolution to the General Conference at its sixty-third (2019) regular session.

*21 September 2018  
Agenda item 16  
GC(62)/OR.9, para. 3*

**GC(62)/RES/11**

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

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) Welcoming the recent inter-Korean Summits, the Summit between the United States and the DPRK and the Summits between China and the DPRK taken place, and highlighting the commitments of relevant parties, including the DPRK's commitment to complete denuclearization of the Korean Peninsula, in the Panmunjeom Declaration of 27 April 2018, the US-DPRK Joint Statement of 12 June 2018, and the Pyeongyang Joint Declaration of 19 September 2018, and the need for such commitments to be fulfilled,

(e) Noting with encouragement the DPRK's recent statement concerning a moratorium on nuclear tests and efforts towards dismantlement of the Punggye-ri nuclear test site,

(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) 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 regarding its

1 January 2018 announcement that during 2017 it had accomplished the goal of “perfecting the national nuclear forces”,

(i) 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,

(j) 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,

(k) 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,

(l) 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,

(m) Noting the Director General’s report that the continuation and further development of the DPRK’s nuclear programme and related statements by the DPRK are a cause for grave concern, including indications consistent with the operation of the Yongbyon Experimental Nuclear Power Plant (5 MW(e)) reactor, the operation of the steam plant that serves the Radiochemical Laboratory, the use of the reported centrifuge enrichment facility and associated construction work, the fabrication of certain reactor components at the light water reactor site, construction activities in and near the Kuryong River and at other locations within the Yongbyon site, and ongoing uranium mining, milling and concentration activities at Pyongsan, and activities conducted within the infrastructure near Pyongyang not inconsistent with a centrifuge enrichment facility, and noting that such actions are clear violations of relevant United Nations Security Council resolutions,

(n) 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 and declining,

(o) 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 intensified efforts by the DPRK Team and the Executive Group 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

(p) Having considered the Director General’s report contained in document GC(62)/12,

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 maintaining peace and stability 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 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. Supports diplomatic engagement between the United States and the DPRK, and between the Republic of Korea and the DPRK, and urges the participants to implement fully their commitments, including commitments by the DPRK to work toward complete denuclearization of the Korean Peninsula as expressed in the 12 June 2018 Joint Statement between the US and the DPRK, the 27 April 2018 Panmunjeom Declaration and the 19 September 2018 Pyeongyang Joint Declaration between the Republic of Korea and the DPRK;
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;
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 intensified efforts to enhance its 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, including actions to update verification approaches and procedures, identify and train inspectors, and ensure the availability of appropriate verification technologies and equipment, 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 lasting peace and prosperity 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-third (2019) regular session.

*21 September 2018  
Agenda item 17  
GC(62)/OR.9, paras 20-21*

**GC(62)/RES/12                      Application of IAEA safeguards in the Middle East**

The General Conference,<sup>1</sup>

- (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(61)/RES/14,

1. Takes note of the Director General's report in document GC(62)/6;

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<sup>1</sup> The resolution was adopted with 115 in favour, 0 against and 13 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);<sup>2</sup>
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

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<sup>2</sup> Operative paragraph 2 was voted on separately and was approved with 114 in favour, 1 against and 13 abstentions (roll-call vote).

13. Requests the Director General to submit to the Board of Governors and the General Conference at its sixty-third (2019) 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”.

*20 September 2018  
Agenda item 18  
GC(62)/OR.8, para. 60*

**GC(62)/RES/13**

**Examination of Delegates’ Credentials**

The General Conference,

Accepts the report by the General Committee on its examination of the credentials of delegates to the Conference’s sixty-second regular session, which is set forth in document GC(62)20.

*20 September 2018  
Agenda item 22  
GC(62)/OR.7, paras 123-124*



## **Other Decisions**

### **GC(62)/DEC/1**

#### **Election of the President**

The General Conference elected Ms Marta ŽIAKOVÁ (Slovakia) as President of the General Conference, to hold office until the close of the sixty-second regular session.

*17 September 2018  
Agenda item 1  
GC(62)/OR.1, paras 13-15*

### **GC(62)/DEC/2**

#### **Election of the Vice- Presidents**

The General Conference elected the delegates of Australia, the Plurinational State of Bolivia, Canada, the Islamic Republic of Iran, Italy, Nigeria, the Philippines and Romania as Vice-Presidents of the General Conference, to hold office until the close of the sixty-second regular session.

*17 September 2018  
Agenda item 1  
GC(62)/OR.1, paras 28-29*

### **GC(62)/DEC/3**

#### **Election of the Chairman of the Committee of the Whole**

The General Conference elected Mr Alberto GLENDER RIVAS (Mexico) as Chairman of the Committee of the Whole, to hold office until the close of the sixty-second regular session.

*17 September 2018  
Agenda item 1  
GC(62)/OR.1, paras 28-29*

**GC(62)/DEC/4                      Election of additional members of the General Committee<sup>1</sup>**

The General Conference elected the delegates of Greece, Kenya, Luxembourg, the United Arab Emirates and the United States of America as additional members of the General Committee, to hold office until the close of the sixty-second regular session.

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<sup>1</sup> As a result of the decisions taken under GC(62)/DEC/1, 2, 3 and 4, the General Committee appointed for the sixty-second (2018) regular session was composed as follows:

Ms Marta ŽIAKOVÁ (Slovakia) as President;

the delegates of Australia, the Plurinational State of Bolivia, Canada, the Islamic Republic of Iran, Italy, Nigeria, the Philippines and Romania as Vice-Presidents;

Mr Alberto GLENDER RIVAS (Mexico) as Chairman of the Committee of the Whole;

and the delegates of Greece, Kenya, Luxembourg, the United Arab Emirates and the United States of America as additional members.

*17 September 2018  
Agenda item 1  
GC(62)/OR.1, paras 28-29*

**GC(62)/DEC/5                      Adoption of the agenda and allocation of items for initial discussion**

The General Conference adopted the agenda for its sixty-second regular session and allocated the items for initial discussion.

*17 September 2018  
Agenda item 5(a)  
GC(62)/OR.2, paras 1-2*

**GC(62)/DEC/6                      Closing date of the session**

The General Conference fixed Friday, 21 September 2018, as the closing date for the sixty-second regular session.

*17 September 2018  
Agenda item 5(b)  
GC(62)/OR.2, paras 3-4*

**GC(62)/DEC/7                      Opening date of the sixty-third regular session of the General Conference**

The General Conference fixed Monday, 16 September 2019, as the opening date for the sixty-third regular session of the General Conference.

*17 September 2018  
Agenda item 5(b)  
GC(62)/OR.2, paras 3-4*

**GC(62)/DEC/8**

**Election of Members to the Board of Governors for 2018–2020<sup>1</sup>**

The General Conference elected the following eleven members of the Agency to serve on the Board until the end of the sixty-fourth (2020) regular session:

Brazil, Ecuador and Uruguay	for Latin America
Italy and Sweden	for Western Europe
Azerbaijan	for Eastern Europe
Morocco and Niger	for Africa
Pakistan	for the Middle East and South Asia
Thailand	for South-East Asia and the Pacific
Egypt	for Africa, the Middle East and South Asia, or South-East Asia and the Pacific

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<sup>1</sup> As a result, the composition of the Board of Governors 2018–2019 at the conclusion of the sixty-second (2018) regular session of the General Conference was as follows: Argentina, Armenia, Australia, Azerbaijan, Belgium, Brazil, Canada, Chile, China, Ecuador, Egypt, France, Germany, India, Indonesia, Italy, Japan, Jordan, Kenya, the Republic of Korea, Morocco, the Netherlands, Niger, Pakistan, Portugal, the Russian Federation, Serbia, South Africa, the Sudan, Sweden, Thailand, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Uruguay and the Bolivarian Republic of Venezuela.

*20 September 2018*  
*Agenda item 9*  
*GC(62)/OR.7, paras 131-145*

**GC(62)/DEC/9**

**Request for restoration of voting rights**

The General Conference acceded to the request of Libya for restoration of voting rights under Article XIX.A of the Statute during the current session of the Conference for a period of one year, ending prior to the commencement of the next regular session of the General Conference.

*20 September 2018*  
*Agenda item 5*  
*GC(62)/OR.7, paras 116-118*

**GC(62)/DEC/10**

**Amendment to Article XIV.A of the Statute**

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 and GC(61)/DEC/10.

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(62)/13 that as of 10 July 2018 only 59 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 63rd (2019) 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”.

*20 September 2018  
Agenda item 10  
GC(62)/OR.7, para. 160*

**GC(62)/DEC/11                      Promotion of Efficiency and Effectiveness of the  
IAEA Decision Making Process**

The General Conference took note of the report of the Chairman of the Committee of the Whole.

*20 September 2018  
Agenda item 20  
GC(62)/OR.7, paras 166-167*

**GC(62)/DEC/12                      Elections to the Agency’s Staff Pension Committee**

The General Conference elected Mr Venince Allen CARILLO (Philippines) as alternate member to represent the General Conference on the Agency’s Staff Pension Committee.

*20 September 2018  
Agenda item 21  
GC(62)/OR.7, para. 168*

