

IAEA ANNUAL REPORT 2020

Article VI.J of the Agency's Statute requires the Board of Governors to submit
"an annual report to the General Conference concerning the affairs of
the Agency and any projects approved by the Agency".

This report covers the period 1 January to 31 December 2020.

Contents

<i>Member States of the International Atomic Energy Agency</i>	v
<i>The Agency at a Glance</i>	vi
<i>The Board of Governors</i>	viii
<i>Composition of the Board of Governors</i>	ix
<i>The General Conference</i>	x
<i>Notes</i>	xii
<i>Abbreviations</i>	xiii

Overview	1
----------------	---

Nuclear Technology

Nuclear Power	41
Nuclear Fuel Cycle and Waste Management	48
Capacity Building and Nuclear Knowledge for Sustainable Energy Development	52
Nuclear Science	55
Food and Agriculture	65
Human Health	69
Water Resources	74
Environment	76
Radioisotope Production and Radiation Technology	80

Nuclear Safety and Security

Incident and Emergency Preparedness and Response	87
Safety of Nuclear Installations	91
Radiation and Transport Safety	94
Radioactive Waste Management and Environmental Safety	97
Nuclear Security	99

Nuclear Verification

Nuclear Verification	109
----------------------------	-----

Technical Cooperation

Management of Technical Cooperation for Development	121
---	-----

Annex	133
Organizational Chart	175

Member States of the International Atomic Energy Agency

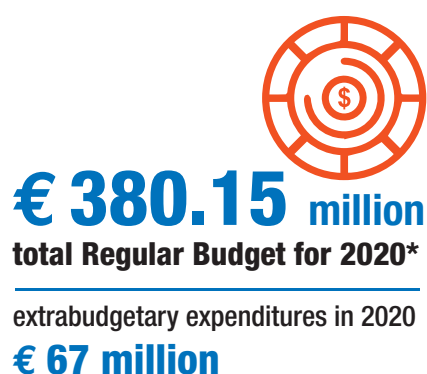
(as of 31 December 2020)



AFGHANISTAN	GEORGIA	OMAN
ALBANIA	GERMANY	PAKISTAN
ALGERIA	GHANA	PALAU
ANGOLA	GREECE	PANAMA
ANTIGUA AND BARBUDA	GRENADA	PAPUA NEW GUINEA
ARGENTINA	GUATEMALA	PARAGUAY
ARMENIA	GUYANA	PERU
AUSTRALIA	HAITI	PHILIPPINES
AUSTRIA	HOLY SEE	POLAND
AZERBAIJAN	HONDURAS	PORTUGAL
BAHAMAS	HUNGARY	QATAR
BAHRAIN	ICELAND	REPUBLIC OF MOLDOVA
BANGLADESH	INDIA	ROMANIA
BARBADOS	INDONESIA	RUSSIAN FEDERATION
BELARUS	IRAN, ISLAMIC REPUBLIC OF	RWANDA
BELGIUM	IRAQ	SAINT LUCIA
BELIZE	IRELAND	SAINT VINCENT AND THE GRENADINES
BENIN	ISRAEL	SAN MARINO
BOLIVIA, PLURINATIONAL STATE OF	ITALY	SAUDI ARABIA
BOSNIA AND HERZEGOVINA	JAMAICA	SENEGAL
BOTSWANA	JAPAN	SERBIA
BRAZIL	JORDAN	SEYCHELLES
BRUNEI DARUSSALAM	KAZAKHSTAN	SIERRA LEONE
BULGARIA	KENYA	SINGAPORE
BURKINA FASO	KOREA, REPUBLIC OF	SLOVAKIA
BURUNDI	KUWAIT	SLOVENIA
CAMBODIA	KYRGYZSTAN	SOUTH AFRICA
CAMEROON	LAO PEOPLE'S DEMOCRATIC REPUBLIC	SPAIN
CANADA	LATVIA	SRI LANKA
CENTRAL AFRICAN REPUBLIC	LEBANON	SUDAN
CHAD	LESOTHO	SWEDEN
CHILE	LIBERIA	SWITZERLAND
CHINA	LIBYA	SYRIAN ARAB REPUBLIC
COMOROS	LIECHTENSTEIN	TAJIKISTAN
COLOMBIA	LITHUANIA	THAILAND
CONGO	LUXEMBOURG	TOGO
COSTA RICA	MADAGASCAR	TRINIDAD AND TOBAGO
CÔTE D'IVOIRE	MALAWI	TUNISIA
CROATIA	MALAYSIA	TURKEY
CUBA	MALI	TURKMENISTAN
CYPRUS	MALTA	UGANDA
CZECH REPUBLIC	MARSHALL ISLANDS	UKRAINE
DEMOCRATIC REPUBLIC OF THE CONGO	MAURITANIA	UNITED ARAB EMIRATES
DENMARK	MAURITIUS	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
DJIBOUTI	MEXICO	UNITED REPUBLIC OF TANZANIA
DOMINICA	MONACO	UNITED STATES OF AMERICA
DOMINICAN REPUBLIC	MONGOLIA	URUGUAY
ECUADOR	MONTENEGRO	UZBEKISTAN
EGYPT	MOROCCO	VANUATU
EL SALVADOR	MOZAMBIQUE	VENEZUELA, BOLIVARIAN REPUBLIC OF
ERITREA	MYANMAR	VIET NAM
ESTONIA	NAMIBIA	YEMEN
ESWATINI	NEPAL	ZAMBIA
ETHIOPIA	NETHERLANDS	ZIMBABWE
FIJI	NEW ZEALAND	
FINLAND	NICARAGUA	
FRANCE	NIGER	
GABON	NIGERIA	
	NORTH MACEDONIA	
	NORWAY	

The Agency's Statute was approved on 23 October 1956 by the Conference on the Statute of the IAEA held at United Nations Headquarters, New York; it entered into force on 29 July 1957. The Headquarters of the Agency are located in Vienna.

The Agency



* At the United Nations average rate of exchange of US \$0.878 to €1.00. The total Regular Budget was €386.66 million at the US \$1.00 to €1.00 rate.

1 139



**active technical
cooperation projects**

124



**active coordinated
research projects
to develop new technology**

184



**States with safeguards
agreements in force** of which

136

**States had additional
protocols in force**

46



**active
IAEA Collaborating Centres
designated Member State institutions
supporting Agency activities**

visitors a month to [iaea.org](https://www.iaea.org)

English site

800 000

up **14%** since 2019

other languages

130 000

up **103%** since 2019



over

1 million

**materials available
in the IAEA library**



**IAEA publications
issued in 2020**

The Board of Governors

The Board of Governors oversees the ongoing operations of the Agency. It comprises 35 Member States and generally meets five times a year, or more frequently if required for specific situations.

In the area of nuclear technologies, in the course of 2020 the Board considered the *Nuclear Technology Review 2020*.

In the area of safety and security, the Board discussed the *Nuclear Safety Review 2020* and the *Nuclear Security Report 2020*.

As regards verification, the Board considered the *Safeguards Implementation Report for 2019*. It approved one safeguards agreement and one additional protocol. The Board considered the Director General's reports on verification and monitoring in the Islamic Republic of Iran in light of United Nations Security Council resolution 2231 (2015). The Board kept under its consideration the issues of the implementation of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Safeguards Agreement in the Syrian Arab Republic and the application of safeguards in the Democratic People's Republic of Korea. The Board also considered the issue of the NPT Safeguards Agreement with the Islamic Republic of Iran.

The Board discussed the *Technical Cooperation Report for 2019* and approved financing for the Agency's technical cooperation programme for 2021. The Board approved an off-cycle interregional technical cooperation project entitled 'Supporting National and Regional Capacity in Integrated Action for Control of Zoonotic Diseases'.

The Board considered reports on the Agency and the COVID-19 pandemic.

The Board approved the Agency's Draft Budget Update for 2021.



Composition of the Board of Governors (2020–2021)

Chair:

HE Ms. Heidi HULAN
Ambassador
Governor from Canada

Vice-Chairpersons:

HE Mr. Károly DÁN
Ambassador
Governor from Hungary

HE Mr. Rapulane MOLEKANE
Ambassador
Governor from the Republic of South Africa

Argentina
Australia
Austria
Brazil
Canada
China
Egypt
Estonia
France
Germany
Ghana
Greece

Hungary
India
Japan
Kuwait
Malaysia
Mexico
Mongolia
New Zealand
Nigeria
Norway
Panama
Paraguay

Peru
Poland
Russian Federation
Saudi Arabia
Senegal
South Africa
Sweden
Switzerland
United Arab Emirates
United Kingdom of Great Britain
and Northern Ireland
United States of America



The General Conference

The General Conference comprises all Member States of the Agency and meets once a year in regular session.

The Conference adopted resolutions on the Agency's financial statements for 2019 and budget for 2021; on the Agency and the COVID-19 pandemic; on nuclear and radiation safety; on nuclear security; on strengthening the Agency's technical cooperation activities; on strengthening the Agency's activities related to nuclear science, technology and applications, comprising non-power nuclear applications, nuclear power applications and nuclear knowledge management; on strengthening the effectiveness and improving the efficiency of Agency safeguards; on the implementation of the NPT Safeguards Agreement between the Agency and the Democratic People's Republic of Korea; and on the application of Agency safeguards in the Middle East. The Conference also adopted decisions on the progress made towards the entry into force of the amendment to Article XIV.A of the Statute of the Agency, approved in 1999; and on the report on the promotion of the efficiency and effectiveness of the Agency's decision making process.





Notes

- The *Annual Report 2020* aims to summarize only the significant activities of the Agency during the year in question. The main part of the report, starting on page 37, generally follows the programme structure as given in *The Agency's Programme and Budget 2020–2021* (GC(63)/2). The objectives included in the main part of the report are taken from that document and are to be interpreted consistently with the Agency's Statute and decisions of the Policy-Making Organs.
- The introductory chapter, 'Overview', seeks to provide a thematic analysis of the Agency's activities within the context of notable developments during the year. More detailed information can be found in the latest editions of the *Agency's Nuclear Safety Review*, *Nuclear Security Report*, *Nuclear Technology Review*, *Technical Cooperation Report* and the *Safeguards Statement and Background to the Safeguards Statement*.
- Additional information covering various aspects of the Agency's programme is available, in electronic form only, on iaea.org, along with the *Annual Report*.
- The designations employed and the presentation of material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers.
- The mention of names of specific companies or products (whether or not indicated as registered) does not imply any intention to infringe proprietary rights, nor should it be construed as an endorsement or recommendation on the part of the Agency.
- The term 'non-nuclear-weapon State' is used as in the Final Document of the 1968 Conference of Non-Nuclear-Weapon States (United Nations document A/7277) and in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The term 'nuclear-weapon State' is as used in the NPT.
- All the views expressed by Member States are reflected in full in the summary records of the June Board of Governors meetings. On 7 June 2021, the Board of Governors approved the *Annual Report for 2020* for transmission to the General Conference.



Abbreviations

AFRA	African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology
ALMERA	Analytical Laboratories for the Measurement of Environmental Radioactivity
AP	additional protocol
ARASIA	Co-operative Agreement for Arab States in Asia for Research, Development and Training related to Nuclear Science and Technology
ARCAL	Regional Co-operation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean
ARTEMIS	Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation
CGULS	Coordinated Group for Uranium Legacy Sites
CLP4NET	Cyber Learning Platform for Network Education and Training
CNS	Convention on Nuclear Safety
CPF	Country Programme Framework
CPPNM	Convention on the Physical Protection of Nuclear Material
CRNS	cosmic ray neutron sensor
CRP	coordinated research project
CSA	comprehensive safeguards agreement
DSRS	disused sealed radioactive source
EPR	emergency preparedness and response
ESST	Energy Scenarios Simulation Tool
FAO	Food and Agriculture Organization of the United Nations
GNIP	Global Network of Isotopes in Precipitation
IACRNE	Inter-Agency Committee on Radiological and Nuclear Emergencies
ICERR	IAEA-designated International Centre based on Research Reactors
ICTP	Abdus Salam International Centre for Theoretical Physics
IEA	International Energy Agency
IGALL	International Generic Ageing Lessons Learned
INIR	Integrated Nuclear Infrastructure Review
INIS	International Nuclear Information System
INLEX	International Expert Group on Nuclear Liability
INMA	International Nuclear Management Academy
INPRO	International Project on Innovative Nuclear Reactors and Fuel Cycles
INSSP	Integrated Nuclear Security Support Plan
IPPAS	International Physical Protection Advisory Service
IRIS	Integrated Review of Infrastructure for Safety
IRRS	Integrated Regulatory Review Service
JCPOA	Joint Comprehensive Plan of Action

KMAV	Knowledge Management Assist Visit
LEU	low enriched uranium
MAED	Model for Analysis of Energy Demand
MSCFP	IAEA Marie Skłodowska-Curie Fellowship Programme
NEA	Nuclear Energy Agency (Organisation for Economic Co-operation and Development)
NEM School	Nuclear Energy Management School (IAEA)
NEST	Nuclear Energy System Assessment Economics Support Tool
NKM School	Nuclear Knowledge Management School (IAEA)
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
OMARR	Operation and Maintenance Assessment for Research Reactors
PACT	Programme of Action for Cancer Therapy (IAEA)
QUATRO	Quality Assurance Team for Radiation Oncology
RANET	Response and Assistance Network
RASIMS	Radiation Safety Information Management System
RCA	Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology
ReNuAL/ReNuAL+	Renovation of the Nuclear Applications Laboratories
RSA	Revised Supplementary Agreement Concerning the Provision of Technical Assistance by the IAEA
RT-PCR	reverse transcription–polymerase chain reaction
SDG	Sustainable Development Goal
SIT	sterile insect technique
SLA	State-level safeguards approach
SMR	small and medium sized or modular reactor
SPECT–CT	single photon emission computed tomography–computed tomography
SQP	small quantities protocol
UNICEF	United Nations Children’s Fund
VETLAB Network	Veterinary Diagnostic Laboratory Network
WHO	World Health Organization
ZODIAC	Zoonotic Disease Integrated Action
