

For official use only

IAEA Support to Member State Efforts in Addressing the COVID-19 Pandemic

Progress Update

Report by the Director General

Summary

- This report presents an updated overview of the assistance rendered by the Agency to its Member States in their efforts to address the COVID-19 pandemic, covering the period March 2020 – January 2021.
- The Agency delivered rapid and effective assistance to 127 countries and territories to address the outbreak of COVID-19, as a result of generous financial and in-kind support from several Member States and the private sector. In addition to the provision of equipment and materials, Agency support continued to be delivered in the form of webinars, educational videos, one-on-one laboratory support, technical guidance and expert services. Significant efforts were made to communicate progress to Member States, as well as to maintain delivery of regular technical cooperation activities.
- The Agency has issued follow up surveys to identify the impact of IAEA support, and conducted studies on the impact of COVID-19 on health services.
- The Agency continues to cooperate with the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO), and is a member of the WHO-led COVID-19 UN Crisis Management Team.

IAEA Support to Member State Efforts in Addressing the COVID-19 Pandemic

Progress Update

Report by the Director General

A. Background

1. Since December 2019, the world has been dealing with a new type of coronavirus, SARS-CoV-2, which causes COVID-19 disease. Declared a pandemic by the World Health Organization (WHO) on 11 March 2020, COVID-19 has affected almost every part of the world, with impacts going far beyond the health sector. As of 8 January 2021, the global number of confirmed cases had reached 86 436 449, and the global number of deaths reported had increased to 1 884 341.¹
2. The IAEA has a long and proven track record of developing and deploying nuclear and nuclear-related techniques for the rapid and accurate detection of animal and zoonotic diseases. Real-time reverse transcription-polymerase chain reaction (RT-PCR) is a key nuclear-derived technique which is used to detect viral pathogens. Other IAEA support for addressing zoonotic disease outbreaks includes capacity building in the use of the sterile insect technique for the suppression of disease-carrying vectors, and the strengthening of networks among national ‘One Health’ actors from the health, veterinary and wildlife sectors in order to improve national/regional early warning systems. In addition, the VETLAB network assists Member States to improve national laboratory capacities for the early detection and control of transboundary animal and zoonotic diseases that threaten livestock and public health.
3. The Agency has provided support to Member States’ efforts to address COVID-19 through the interregional technical cooperation project INT0098, ‘Strengthening Capabilities of Member States in Building, Strengthening and Restoring Capacities and Services in Case of Outbreaks, Emergencies and Disasters’ which was approved by the Board of Governors at its meeting in November 2019 as part of the 2020–2021 technical cooperation programme.
4. IAEA assistance included the provision of equipment and materials, as well as technical advice and guidance to individual laboratories, the issuance of guidelines and standard operating procedures, and the delivery of targeted webinar series in Arabic, French, English, Spanish and Russian.
5. Document GOV/INF/2020/6 provides details of IAEA support up to May 2020, with an update issued in August in document GC(64)/INF/4.

¹ <https://covid19.who.int/>

B. IAEA Support to Member States in their Efforts to Address COVID-19

B.1. Delivery of diagnostic and protection equipment

127
countries and territories requested and received assistance (see Annex 1)



285
national laboratories/institutions received COVID support packages and technical guidance



1950
RT-PCR and diagnostic kits and related items ordered for countries



500+
APH counterpart laboratories received updated SOPs, reagent information and validation data, delivered via VETLAB



6. IAEA support was provided in the form of a package of equipment and materials that included detection equipment (real-time RT-PCR and kits) together with reagents and laboratory consumables, as well as biosafety cabinets and equipment for sampling, testing, quality control and personal protection for the safe analysis of samples.

7. To address the challenges of national lockdowns, global travel limitations, irregular cargo flights and other COVID-19 restrictions that affected the supply chain and logistics for final delivery to countries, the Agency made every effort to coordinate with suppliers and freight forwarders on production and shipment, and continues to work closely with Member States to facilitate customs clearance and local deliveries. In total the Agency issued procurement orders for 1 950 RT-PCR and diagnostic kits and related items, delivered through over 2 500 shipments. Supply and logistics agreements were concluded with the World Health Organization and the World Food Programme, and the Agency coordinated with the United Nations and UNICEF on joint procurement for personal protective equipment and logistics.



Staff of Guatemala's National Health Laboratory receives COVID-19 equipment donated by the IAEA. Photo: National Health Laboratory, Guatemala.



COVID-19 equipment donated by the IAEA is delivered to the National Institute of Hygiene in Lome, Togo. Photo: J. Tchaou.

8. COVID-19 kits and reagents were tested and validated by the Animal Production and Health (APH) Laboratory in cooperation with the Austrian Agency for Health and Food Safety, and the results subsequently contributed to ensuring the procurement of reliable kits and reagents. In cooperation with the World Health Organization, the IAEA worked on technical specifications, including minimum requirements, of medical imaging devices necessary for diagnosing COVID-19 complications. These technical specifications were shared with Member States.

B.2. Education, training and guidance

9. Given travel restrictions, and the urgent need to provide training, guidance and advice as widely and as rapidly as possible, the IAEA offered multiple online sessions on various relevant topics in the form of webinars. The recordings were posted online on the IAEA Human Health Campus², and are available to all interested viewers.

10. Organized to strengthen COVID-19 testing laboratories, the webinar series covered guidance on laboratory requirements for the effective use of real-time RT-PCR, including biosafety and biosecurity frameworks; best practices of sample collection and preparation for real-time RT-PCR; interpretation of results and quality assurance and quality control; and finally a problem solving session. Several webinars were provided in close collaboration with the WHO regional office for the West Pacific³, and the Pan American Health Organization (PAHO/WHO). The series is being replicated in other regions through the WHO regional offices for South-East Asia and the Eastern Mediterranean. The webinars have or are being delivered in Arabic, English, French and Spanish, and will be delivered in Russian.

11. The IAEA also provided additional webinars for health care providers in nuclear medicine and radiology facilities, aimed at helping them to adjust their standard operating procedures to minimize the risks of COVID-19 infection among patients, staff and the public. These webinars, unlike the COVID-19 training webinars, focused on providing advice to nuclear medicine, radiology and radiation oncology departments, and on offering best practices in rotation policy, use of personal protection equipment, and other institutional considerations and experiences.



Staff at the Laboratory for Molecular Diagnostic, Veterinary Institute, Faculty of Veterinary Medicine, Skopje North Macedonia unpacking IAEA donated equipment. Photo: Prof. D-Rigor Djadjovski.



Staff at the National Public Health Laboratory in Malaysia using IAEA donated equipment. Photo: National Public Health Laboratory, Ministry of Health Malaysia.



webinars on Standard Operating Procedures (SOPs) were held for health care providers in nuclear medicine, radiology and radiation oncology facilities, with over

6000 participants, and more than **7900** subsequent views of the recordings



² <https://humanhealth.iaea.org/HHW/covid19/webinars.html>

³ <https://www.iaea.org/tcap-covid-19-webinars>

12. The Agency webinars on real-time RT-PCR reached just over 2 000 participants and had almost 2 000 subsequent viewers, while webinars on standard operating procedures for health care providers in nuclear medicine and radiology facilities reached over 6 000 participants and had more than 7 900 subsequent viewers.



13. Nine instructional videos were made available on the use of personal protective equipment, collection, transportation and storage of samples, and on real-time RT-PCR for the detection of COVID-19. Nine additional videos on the use of serology for evaluation of COVID-19 were also made available. All videos can be accessed on the IAEA's Human Health Campus website⁴, together with a video of frequently asked questions on real-time RT-PCR, and a wide range of information materials on COVID-19⁵.

14. In addition, more than 500 APH counterpart laboratories received updated standard operating procedures (SOPs), reagent information and validation data, delivered through the VETLAB platform.



IAEA-donated equipment was delivered to Trinidad Public Health Laboratory. Photo: Dr. Arianne Brown Jordan/ Trinidad Public Health Laboratory.

B.3. Communicating with Member States on COVID-19 related activities, and ensuring continuing implementation of regular technical cooperation activities

15. Throughout the pandemic, the IAEA has maintained continuous contact with all stakeholders on its COVID-19 response, providing frequent updates on procurement, shipments and capacity building activities to Member States and other stakeholders. Additional information on the scope of IAEA

⁴ <https://humanhealth.iaea.org/HHW/covid19/nmdi/nmdi.html>

⁵ <https://humanhealth.iaea.org/HHW/covid19/index.html>

assistance and on shipment procedures was provided in a Frequently Asked Questions (FAQs) document, which was made available in English, French and Spanish.

16. Permanent Missions to the IAEA, National Liaison Officers and end-users in the laboratories were notified when procurement orders were issued, including the expected date goods would be ready for shipment. Member States and stakeholders were informed when the shipment was picked up or in transit, when it arrived in the country, and when it was delivered to the end-user. The Permanent Missions played an important role in facilitating shipments and permissions, enabling shipments to arrive in a timely manner at their destinations.

17. Donor countries were also kept continuously informed on the progress of procurement and delivery relevant to their contributions through regular reports and other information materials. In addition, information on webinars and equipment delivery was made available to the public on the IAEA web site⁶.

18. The delivery of IAEA support to Member States to address the COVID-19 pandemic required an unprecedented effort on the part of the Secretariat, especially as the delivery of regular technical cooperation activities continued uninterrupted, albeit in extraordinary circumstances and during a period of unforeseeable challenges and travel restrictions. The informal briefing to Member States on the Agency's Technical Cooperation Programme for 2021, held on 30 October 2020, included an update on the delivery of the regular TC programme during the pandemic. The Secretariat engaged closely with Member States and programme partners to ensure the safety of fellows and scientific visitors, and to ensure business continuity. TC activities and events were postponed or reprioritized, while other elements of programme delivery were stepped up. Project coordination meetings and capacity building activities were held virtually where possible, and regular TC procurement activities continued. As a result of these and other actions, the TC programme achieved a high implementation rate of 80.4% by the end of 2020.

B.4. Assessing the impact of IAEA support, and the impact of COVID-19 on health services

19. To confirm that IAEA COVID-19 assistance had reached the intended end-users, and to identify its impact, the IAEA is issuing a survey to the laboratories receiving assistance. The objective of the survey is to measure the impact of the support provided by the IAEA, and to assess its sustainability. As of 6 January 2021, the survey findings reveal that the 76 laboratories that have responded so far have provided testing services to over 7.5 million people (3.7 million men and 3.8 million women). The IAEA inputs contributed to increasing the capacities of these laboratories.

7.5 million people tested so far  = **3.7** million men  + **3.8** million women 

20. Of the responding laboratories so far, 10% had had no PCR machine apart from that supplied by the IAEA. 86% confirmed that the emergency assistance package provided by the IAEA could cover the initial gap in testing needs, and 96% of the laboratories acknowledged that IAEA support had enhanced their ability to detect COVID-19 and other pathogens, or to provide such services.

⁶ <https://www.iaea.org/topics/covid-19/iaea-assistance-for-the-rapid-detection-and-management-of-covid-19>

21. 94% of laboratories confirmed that they will be able to continue to provide testing beyond the initial IAEA assistance. Only 6% reported challenges in continuing testing, due to current global challenges in procuring laboratory reagents and consumables.



The Ghana Atomic Energy Commission handed over COVID-19 testing kits donated by the IAEA to the Ministry of Health in Accra, Ghana. Photo: Prof B.J.B Nyarko/GAEC.

22. The IAEA has also conducted additional studies, including on the impact of COVID-19 on the provision of nuclear medicine diagnostic and therapeutic procedures. This study demonstrated a significant reduction in the number of diagnostic and therapeutic procedures carried out during the pandemic, and insufficient supplies of essential materials such as radioisotopes, generators and kits. Two new articles, *Impact of COVID-19 on Diagnosis of Heart Disease Worldwide: Findings from a 108-Country IAEA Study* and *Global Impact of COVID-19 on Nuclear Medicine Departments: An International Survey in April 2020*⁷, have been accepted for publication by external journals.

C. Funding, and Partnerships with the Food and Agriculture Organization of the United Nations and the World Health Organization

23. Member States and the private sector provided generous extrabudgetary funding totalling €27.1 million to support the Agency's COVID-19 related activities (see Annex 2).

24. The United Nations Crisis Management Policy was activated for the COVID-19 pandemic. The IAEA joined the COVID-19 UN Crisis Management Team (COVID-19 CMT) led by the WHO⁸ on 25 March 2020. The

extrabudgetary
funding totalling
€ 27.1 M

⁷ <http://jnm.snmjournals.org/content/early/2020/07/23/jnumed.120.249821.full.pdf+html>

⁸ The COVID-19 CMT also includes the United Nations Development Coordination Office, United Nations Office for the Coordination of Humanitarian Affairs, International Maritime Organization, United Nations Department of Safety and

COVID-19 CMT facilitates and aligns United Nations efforts to enable coherent coordinated action, leveraging synergies and ensuring transparency and accountability in response to COVID-19. Through this cooperation, the IAEA has ensured that the equipment and materials procured to address IAEA Member States' requests are in alignment with the overall UN response.

25. The IAEA has worked closely with the FAO and with WHO since the beginning of the COVID-19 outbreak in order to provide a coordinated response to requests from its Member States.

Annex 1: Countries and territories that have requested and received IAEA support to address COVID-19 as of 31 December 2020		
AFRICA		
Algeria	Gambia, The (non-IAEA Member State)	Niger
Angola	Ghana	Nigeria
Benin	Guinea (non-IAEA Member State)	Rwanda
Botswana	Kenya	Senegal
Burkina Faso	Lesotho	Seychelles
Burundi	Liberia	Sierra Leone
Cameroon	Libya	South Africa
Chad	Madagascar	Sudan
Congo	Malawi	Togo
Côte d'Ivoire	Mali	Tunisia
Democratic Republic of the Congo	Mauritania	Uganda
Djibouti	Mauritius	United Republic of Tanzania
Egypt	Morocco	Zambia
Eswatini	Mozambique	Zimbabwe
Ethiopia	Namibia	
ASIA AND THE PACIFIC		
Afghanistan	Lao People's Democratic Republic	Papua New Guinea
Bangladesh	Lebanon	Philippines
Bahrain	Malaysia	Sri Lanka
Cambodia	Maldives (non-IAEA Member State)	Syrian Arab Republic
Fiji	Mongolia	Thailand
Indonesia	Myanmar	Viet Nam
Iran, Islamic Republic of	Nepal	Yemen
Iraq	Oman	Territories under the jurisdiction of the Palestinian Authority
Jordan	Pakistan	
Kuwait	Palau	
EUROPE and Central Asia		
Albania	Hungary	San Marino
Armenia	Kazakhstan	Serbia
Azerbaijan	Kyrgyzstan	Slovenia
Belarus	Latvia	Tajikistan
Bosnia and Herzegovina	Montenegro	Ukraine
Bulgaria	North Macedonia	Uzbekistan
Croatia	Poland	
Czech Republic	Republic of Moldova	
Georgia	Romania	
LATIN AMERICA AND THE CARIBBEAN		
Antigua and Barbuda	Dominican Republic	Panama
Argentina	Ecuador	Paraguay
Barbados	El Salvador	Peru
Belize	Grenada	Saint Kitts and Nevis (non-IAEA Member State)
Bolivia, Plurinational State of	Guatemala	Saint Lucia

Brazil	Guyana	Saint Vincent and the Grenadines
Chile	Haiti	Trinidad and Tobago
Colombia	Honduras	Uruguay
Costa Rica	Jamaica	Venezuela, Bolivarian Republic of
Cuba	Mexico	
Dominica	Nicaragua	

Annex 2: Extrabudgetary contributions in Euro (as of 31 December 2020)	
Member State	Contribution
Australia	46 023
Canada	3 268 401
Finland	200 000
Germany	500 000
Japan*	3 000 000
Korea, Republic of	260 011
Netherlands**	1 500 000
Norway	2 065 433
Pakistan	39 960
Russian Federation	500 000
San Marino	32 866
Sudan	30 000
Sweden	190 840
United Kingdom	561 798
United States of America	9 964 000
Other contributors	
Takeda Pharmaceutical Company Limited	4 102 732
Total	26 262 064
In-kind Contributions	
China	1 842 000
Malta	25 000
Total	1 867 000
<p>* In addition, Japan contributed 1 million Euro in support of a project 'Detection of emerging and re-emerging transboundary animal and zoonotic pathogens at the animal human interface' in connection with the COVID-19 outbreak.</p> <p>** The Netherlands has contributed an additional 1 million Euro, which was in the process of acceptance when this document was drafted.</p>	