JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of

GEORGIA

Mission report:

10-14 June, 2019

World Health Organization

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ACKNOWLEDGEMENTS

ABBREVIATIONS

AFP	acute flaccid paralysis
AMR	antimicrobial resistance
ANRS	Agency for Nuclear and Radiation Safety
BARN	Baltic Antibiotic Resistance Collaborative Network
BNSR	Biosurveillance Network of the Silk Road
BSE	bovine spongiform encephalopathy
BSEC	Black Sea Economic Cooperation
BSL	biosafety level
CAESAR	Central Asian and Eastern European Surveillance of Antimicrobial Resistance
CBRN	chemical/biological/radiological/nuclear
CCHF	Crimean–Congo haemorrhagic fever
CPD	continuing professional development
CISID	Centralized Information System for Infectious Diseases
DG ECHO	European Commission Directorate-General for European Civil Protection and Humanitarian Aid Operations
DTRA	United States Defence Threat Reduction Agency
DURC	dual use research of concern
ECDC	European Centre for Disease Prevention and Control
EDP	especially dangerous pathogens
EIDSS	electronic integrated disease surveillance system
EMS	Emergency Management Service
EMT	emergency medical team
EOC	emergency operations centre
EQA	external quality assessment
ESCUA	Emergency Situations Coordination and Urgent Assistance Centre
EU	European Union
EUCAST	European Committee on Antimicrobial Susceptibility Testing
EUFMD	European Commission for the Control of Foot-and-Mouth Disease
EVAC	European Vaccination Action Plan
FAO	Food and Agriculture Organization of the United Nations
FBE	food business establishment
FBO	food business operator
FETP	field epidemiology training programme
GAP	Global Action Plan
Gavi	Global Alliance for Vaccines and Immunization
GHSA	Global Health Security Agenda
GLASS	Global Antimicrobial Surveillance System
GMP	good management practice
GVAP	Global Vaccine Action Plan
HACCP	Hazard Analysis Critical Control Points
HCAI	health care-associated infections
HMIS	health management information system
IAEA	International Atomic Energy Agency
IHR	International Health Regulations (2005)

ILI	influenza-like illness
IMS	Incident Management System
INFOSAN	International Food Safety Authorities Network
IPC	infection prevention and control
IRRS	Integrated Regulatory Review Service
ISO	International Organization for Standardization
JADE	Joint Assessment and Detection Event
JEE	joint external evaluation
LIMS	laboratory information management system
LMA	Laboratory of the Ministry of Agriculture
LSS	laboratory support station
MEPA	Ministry of Environmental Protection and Agriculture
MOH	Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs
NAITS	animal identification and registration programme
NAPHS	National Action Plan for Health Security
NAP	national action plan
NCDC	National Centre for Disease Prevention and Control and Pubic Health
NCSP	National Civil Security Plan
NEQAP	National External Quality Assessment Programme
NFA	National Food Agency
NFP	National Focal Point
NIP	National Immunization Programme
OIE	World Organization for Animal Heath
PCR	polymerase chain reaction
PHC	public health centre
PHEIC	public health event of international concern
PHEOC	Public Health Emergency Operations Centre
PHPR	Public Health Preparedness and Response Unit
POE	points of entry
PPE	personal protective equipment
PVS	Performance of Veterinary Services
RASFF	Rapid Alert System for Food and Feed
SARI	severe acute respiratory infection
SOP	standard operating procedure
SSCC	Ship Sanitation Control Certificate/
SSCEC	Ship Sanitation Control Exception Certificate
TESSy	European surveillance system
UNICEF	United Nations Children's Fund
US CDC	United States Centers for Disease Control and Prevention
WAHID	World Animal Health Information Database
WAHIS	World Animal Health Information System
WASH	water, sanitation, and hygiene
WFME	World Federation of Medical Education
ZDL	zonal diagnostic laboratory

EXECUTIVE SUMMARY

The Joint External Evaluation (JEE) team would like to express its appreciation to Georgia for volunteering for evaluation. This shows a commitment, foresight and leadership from senior levels of government that will be critical to success in building and maintaining Georgia´s core capacities under the International Health Regulations (IHR (2005)). We highly appreciate and acknowledge all the preparatory work done on the Georgia side, and we thank our country colleagues for all the helpful and valuable input provided to the expert team during the JEE mission.

The JEE is part of a continuing process that Georgia has undertaken in order to implement the IHR (2005) that has been ongoing since 2007. This progression should be aligned with other processes, such as the European Centre for Disease Prevention and Control (ECDC) mission organized for immediately after this JEE. Once the JEE process is concluded, we hope that the priority actions in this report can be captured in the Georgia *National Action Plan for Health Security* (NAPHS), with costed activities if these are requested.

Findings from the joint external evaluation

Georgia acknowledges the importance of emergency preparedness, communicable disease control, surveillance and response, and regulates the area with comprehensive laws and byelaws. The country has a dedicated workforce that includes qualified medical and public health professionals (including a very high number of doctors), veterinarians, preparedness experts and laboratory specialists. There is multi-level, multisectoral, capacity to respond to emergencies, and the country has international coordination mechanisms that have been developed under the IHR framework, e.g. the Biosurveillance Network of the Silk Road (BNSR).

The members of the JEE mission were from multiple countries, and the team was a manifestation of the purpose of the IHR (2005) themselves: to work across all borders to prevent, detect and respond; to strengthen national public health preparedness and global health security; and to help achieve health for all. Even in times of political tension it is important that the IHR (2005) are able to achieve the objective of good communication across sectors and across borders.

During the JEE mission, Georgia´s capacities in 19 technical areas were evaluated through a peer-to-peer, collaborative process that brought subject matter experts together with members of the JEE team for a week of collaborative discussion and field visits. This process led to consensus on scores and priority actions in those 19 areas.

Four over-arching recommendations emerged from the week. These are intended to address cross-cutting challenges affecting Georgia´s capacities across many of the different technical areas that are explored in greater depth in the JEE process. These over-arching recommendations are outlined below.

1. Increase support for the IHR (2005) at the highest levels of government.

The Georgian public health sector is highly engaged with capacity building under the IHR. These efforts would benefit from a corresponding level of awareness and political support at the highest levels of government, and from several ministries.

2. Georgia should establish and test a programme to enhance cross-sectoral cooperation, collaboration and procedures during peacetime, to be sure that existing structures and mechanisms are operationalized, including through regular information sharing, as well as joint training and simulation exercises.

It is our view that the best way of securing good cross-sectoral cooperation during an emergency is to establish and exercise these structures and lines of communication during peacetime.

Georgia enjoys a well-regulated legal framework for most IHR (2005) activities, with a public health system capable of handling substantial demand, and strong leadership from the National Centre for Disease Prevention and Control and Pubic Health (NCDC). Despite this strength, a range of IHR-relevant practices are not yet fully in place. Georgia's capacities would be greatly strengthened by organized efforts to create, test and strengthen structures for daily interaction and collaboration between sectors, fostering relationships that would increase the country's overall effectiveness in emergency response. Multisectoral collaboration and coordination is needed at all levels: in shaping and implementing legislation, for high-level organization and coordination, and at the technical/operational level. Intersectoral information sharing, joint risk assessment and joint incident management should be standard practice.

As a short-term priority, Georgia should map current obstacles to multisectoral collaboration, and work to overcome existing barriers.

Proven interventions to enhance health security include regular joint training of professionals working in human and animal health and other IHR-related hazards, joint field simulation exercises and after-action reviews of real responses to emergencies.

3. Georgia should ensure that cross-sectoral activities include structured efforts to build cooperation and communication across the public and private sectors.

Prevention of disasters and epidemics is a huge public and collective responsibility for all governments and ministries. In Georgia, many of the operational responsibilities for related functions are held by private enterprises. To secure effective ways of working both in peacetime and during emergencies, any structured interventions to build cross-sectoral cooperation should include specific efforts to build links, operational functions and reporting between the public and private sectors. This issue is challenging, but must be addressed, so that systems that work well can be scaled up and duplicated, and those that do not can be improved.

4. Georgia should establish a compensation mechanism for farmers in case of animal diseases that require elimination of livestock, in order to ensure that economic loss is not a barrier to effective reporting and control of animal disease.

Animal health and human health are closely intertwined. Most emerging infectious diseases are zoonoses. The IHR has an all-hazard and a One Health approach. To avoid the spread of diseases between animals and humans, authorities for animal health, food safety and human health must work closely together.

Georgia scores and priority actions

The table below is the summary of the final scores for each technical area (further details are shown in the respective report chapters), as agreed by the national and external JEE teams.[1]

Briefly, the scoring is a 5-step Likert scale in which a score of 1 designates no capacity, and incremental obligatory criteria for each indicator must be fulfilled to reach the next level. A score of 5 designates that the country has the required capacity and is able to sustain it. Indicators are proxies and are chosen with the aim of representing a probable wider capability than the actual measured factor.

For ease of overview, a 'traffic light' colouring system is used, whereby scores of 1 are shown as red; scores of 2 and 3 are yellow; and 4 and 5 are green.

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1 The principles of the scoring system are described in the JEE tool, available from:
   http://www.who.int/ihr/publications/WHO_HSE_GCR_2016_2/en/

SCORES AND PRIORITY ACTIONS

Technical areas	Indicator no.	Indicator	Score	Priority Actions
PREVENT				
National legislation, policy and financing	P.1.1	The State has assessed, adjusted and aligned its domestic legislation, policies and administrative arrangements in all relevant sectors to enable compliance with the IHR	3	Review existing legislation on chemical and radiological issues to ensure it is in line with the IHR (2005) and relevant European Union legislation. Clarify the allocation of financial resources for emergencies, and develop operating procedures to coordinate funding for use in emergencies.
	P.1.2	Financing is available for the implementation of IHR capacities	3	
	P.1.3	A financing mechanism and funds are available for timely response to public health emergencies	3	
IHR coordination, communication and advocacy	P.2.1	A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR	3	Improve information exchange mechanism between the IHR National Focal Point (NFP) and non-health sectors. Increase IHR awareness and enhance advocacy measures across sectors. Strengthen training and recruitment of the IHR-relevant workforce in all sectors and at all levels.
Antimicrobial resistance	P.3.1	Effective multisectoral coordination on AMR	3	Optimize the use of antibiotics in animal health, making prescription mandatory for animal antibiotics and prohibiting their use as growth promoters. Improve awareness and understanding of AMR by using effective communication, education and training: • Develop a joint One Health workshop for food safety, veterinary and medical personnel to increase awareness around AMR and infection prevention and control (IPC). • Develop and distribute public awareness material on human and animal aspects of AMR. • Increase the use of different media to inform the public on AMR, antibiotics and infections. Prevent health care-associated infections (HCAIs) by introducing effective IPC measures in human and animal health. Use the WHO 'core components' materials to develop national guidelines and measure compliance. Develop and implement suitable methods to measure HCAIs and antibiotic resistance, report and discuss results in all professional groups at a facility level, and implement improvement actions based on results.
	P.3.2	Surveillance of AMR	2	
	P.3.3	Infection prevention and control	2	
	P.3.4	Optimize use of antimicrobial medicines in human and animal health and agriculture	1	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Zoonotic disease	P.4.1	Coordinated surveillance systems in place in the animal health and public health sectors for zoonotic diseases/ pathogens identified as joint priorities	4	Develop and implement a compensation scheme in the animal sector, along with One Health public awareness campaigns, to encourage reporting of suspicions around priority zoonoses. Develop procedures and provide One Health training to veterinarians and medical doctors in local and rural areas, to improve collaboration. Organize nationwide awareness campaigns to improve One Health collaboration in rural areas.
	P.4.2	Mechanisms for responding to infectious and potential zoonotic diseases established and functional	3	Competent authorities for public health, animal health and wildlife should jointly review coordinated surveillance systems and mechanisms for responding to infectious and potential zoonotic diseases, using the WHO/ Food and Agriculture Organization of the United Nations (FAO)/ World Organization for Animal Heath (OIE) Tripartite Guide to Addressing Zoonotic Diseases in Countries. Train public health centre epidemiologists, medical doctors and veterinarians in routine collection of risk factor data.
Food safety	P.5.1	Surveillance systems in place for the detection and monitoring of foodborne diseases and food contamination	2	Develop and adopt a multisectoral national food safety contingency plan. Develop and implement training programmes for health workers and food inspectors on managing contamination events and outbreaks of foodborne disease. Strengthen early warning systems by including food safety issues in the EIDSS system. Establish and equip a foodborne outbreak response team. Develop and implement a public awareness campaign on food handling.
	P.5.2	Mechanisms are established and functioning for the response and management of food safety emergencies	2	
Biosafety and bios-ecurity	P.6.1	Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities)	3	Establish and implement a mandatory system of biosafety and biosecurity laws and regulations, including in laboratories in the private and academic sectors, covering all kinds of biological material (infectious pathogens, toxins and plants). Existing biosafety legislation/regulations should be implemented in all sectors and not just the key laboratories of the NCDC and Laboratory of the Ministry of Agriculture (LMA) networks.
	P.6.2	Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture)	2	Establish and train central or regional controlling bodies, enabling them to perform their roles. They must be independent and funded by the state or under state control. Provide funding to support biosafety and biosecurity programmes/initiatives and their oversight and enforcement at ministry level. Develop a comprehensive biosecurity system. Develop a comprehensive biosafety and biosecurity training programme and make it mandatory for facilities working with infectious agents and toxins. It should also be provided as part of the training of academics and technical personnel.

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Immuni-zation	P.7.1	Vaccine coverage (measles) as part of national programme	5	Complete the pilot of the new immunization registry system and conduct a performance evaluation. Assuming the evaluation of the new immunization registry is positive, establish the registry nationwide and provide relevant education, training and ongoing mentoring.
	P.7.2	National vaccine access and delivery	5	Establish the requirements for increased operational support to ensure continued operation of the immunization programme after graduation from support of Gavi, the Vaccine Alliance.
DETECT				
National laboratory system	D.1.1	Laboratory testing for detection of priority diseases	4	Expand national regulations for laboratory certification and accreditation to all diagnostic laboratories in Georgia. Create national capacity for regular assessment of all clinical and veterinary laboratories in the country, in order to assess compliance with quality assurance requirements. Implement a continuous education programme on quality-assured diagnostics, for workers in medical and veterinary diagnostic laboratories. Expand implementation of the Quality Management System and International Organization for Standardization (ISO) accreditation to include diagnostic laboratories from all sectors in addition to the laboratory networks at NCDC and the Ministry of Agriculture. Improve diagnostic capacities at primary health care level.
	D.1.2	Specimen referral and transport system	4	
	D.1.3	Effective national diagnostic network	4	
	D.1.4	Laboratory quality system	3	
Surveil-lance	D.2.1	Surveillance systems	4	Establish regular monitoring and evaluation of both the human and animal health surveillance systems as a basis for ongoing development and improvement. Prepare a plan for integration and interoperability between the health and laboratory information management systems (HIMS/LIMS) and the electronic integrated disease surveillance system (EIDSS). Design a training programme for data analysis, and specifically risk assessment, for staff in the public and animal health sectors. Ensure the sustainability of EIDSS and other electronic tools by planning, staffing and funding maintenance, development and IT support.
	D.2.2	Use of electronic tools	4	
	D.2.3	Analysis of surveillance data	4	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Reporting	D.3.1	System for efficient reporting to FAO, OIE and WHO	5	Enhance reporting using an all-hazards approach that covers food safety and non-biological threats such as chemical and radiation events. Promote and plan regular staff training and conduct simulation exercises to enhance awareness and reporting capabilities in all sectors.
	D.3.2	Reporting network and protocols in country	5	Raise awareness of IHR and reporting requirements in other (non-health) sectors. Create incentives and awareness among farmers, rural communities and veterinarians, to facilitate notification of suspected events with potential public health consequences, such as zoonotic diseases.
Human resources (animal and human health sectors)	D.4.1	An up-to-date multi-sectoral workforce strategy is in place	2	Prepare and implement a One Health public health personnel development strategy that includes mechanisms to address projected retirements of regional and district staff.
	D.4.2	Human resources are available to effectively implement IHR	3	Develop a mechanism to link continued medical education to career development.
	D.4.3	In-service trainings are available	3	Develop criteria for reviewing and quality assurance of the curricula of relevant Bachelors' and Masters' degree courses, to ensure compliance with international standards.
	D.4.4	FETP or other applied epidemiology training programme in place	4	Integrate IHR (2005) and emergency management content into multisectoral training programmes, and create a continued professional education system in all IHR-related cadres.

RESPOND

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Emergency preparedness	R.1.1	Strategic emergency risk assessments conducted and emergency resources identified and mapped	2	Develop the criteria and indicators for conducting national risk, vulnerability and capacity assessments, as well as accompanying 'function-specific' indicators. Encourage all functions to complete or update their function-specific emergency risk management plans in coordination with the Emergency Management Agency and each other, to ensure function-compatible emergency prevention and response operations.
	R.1.2	National multisectoral multi-hazard emergency preparedness measures, including emergency response plans, are developed, implemented and tested	2	Disseminate function-specific plans widely among supporting agencies and the public. The units of the National Security System should carry out intensive training of appropriate persons in the field of civil security and emergency management.
Emergency response operations	R.2.1	Emergency response coordination	3	Continue to develop sector risk-specific and multisectoral first responder groups.
	R.2.2	Emergency Operations Centre (EOC) capacities, procedures and plans	2	Continue to develop the NCDC Public Health Emergency Operations Centre (PHEOC), in accordance with WHO guidance on developing a PHEOC.
	R.2.3	Emergency Exercise Management Programme	2	Develop a public health emergency management programme that includes an exercise and after-action report/improvement plan component. The NCDC should adopt a plan development programme based on a documented risk assessment process.

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Linking public health and security authorities	R.3.1	Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical or radiological event	3	Review current legislation, including provisions on managing incidents of unknown, manmade and/or accidental origin. Regulate collaboration between sectors responsible for managing all IHR-related hazards, and develop, implement and exercise standard operating procedures (SOPs) to strengthen the joint capacity of public health and security services to respond to chemical/biological/radiological events. Create dedicated training programmes for public health and law enforcement agencies responsible for joint risk assessment and response. Conduct training for health and security services on specific topics, such as joint investigations of events of unknown origin and implementing public health countermeasures with respect to persons, baggage, cargo and goods.
Medical counter-measures and personnel deployment	R.4.1	System in place for activating and coordinating medical countermeasures during a public health emergency	2	Develop and institute a regulatory framework and mechanism for developing emergency medical teams (EMTs). Establish a database of trained personnel and volunteers. Establish a process for exchanging information and best practices concerning EMTs with WHO and other international partners, and include infectious disease and chemical/biological/radiological/nuclear (CBRN) responses. Improve guidelines to include budgeting and logistics for stockpiling medical countermeasures in accordance with Georgia's identified needs.
	R.4.2	System in place for activating and coordinating health personnel during a public health emergency	2	
	R.4.3	Case management procedures implemented for IHR relevant hazards	2	Develop the treatment capacity of hospitals and clinics, including strengthening the capacity of staff to identify and treat patients afflicted by IHR-related hazards.
Risk communication	R.5.1	Risk communication systems for unusual/unexpected events and emergencies	1	Implement byelaws to ensure effective risk communication and the introduction of early warning systems throughout Georgia. Complete all levels of the national emergency management plan. Create a national action plan for risk communication and implement a related awareness-raising strategy. Implement standard practices for establishing systematic public communication mechanisms for use during emergencies. Create a system for collecting data and analysing problems to facilitate responses to dangerous behaviour and misinformation, and to fight against panic.
	R.5.2	Internal and partner coordination for emergency risk communication	3	
	R.5.3	Public communication for emergencies	3	
	R.5.4	Communication engagement with affected communities	2	
	R.5.5	Addressing perceptions, risky behaviours and misinformation	1	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
IHR-RELATED HAZARDS AND POINTS OF ENTRY				
Points of entry (PoEs)	**PoE.1**	Routine capacities established at points of entry (POE)	**2**	Create a multisectoral public health emergency contingency plan for all relevant sectors and services at POEs. This should define the roles and responsibilities of all stakeholders and contain SOPs for actions such as regular exchange of information between POE, health authorities and facilities, and safe referral and transport of sick travellers.
	PoE.2	Effective public health response at points of entry	**1**	Implement vector control programmes and appropriate sanitary measures at POE, involving the relevant private provider companies and supervising their work. Create SOPs for periodic training and simulation exercises to improve staff capacity and multisectoral communication.
Chemical events	**CE.1**	Mechanisms established and functioning for detecting and responding to chemical events or emergencies	**2**	Establish a specific response plan for chemical events in line with the IHR (2005), to include: mapping of hazardous chemical sites, a list of priority chemicals, and the responsibilities of all relevant agencies. Develop a training and exercise programme for medical teams to back up first responders and capture and share lessons with the international CBRN community.
	CE.2	Enabling environment in place for management of chemical events	**2**	Implement relevant legislation on chemical event surveillance, alerting and response. Strengthen laboratory capability to test for CBRN substances and toxic industrial chemicals. Work towards establishing a poisons information centre (for example, through training toxicology specialists and providing access to a toxicology information database).
Radiation emergencies	**RE.1**	Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	**3**	Work with national surveillance partners to develop a case definition for radiation poisoning. Develop a training/exercise programme based on the draft response plan. Develop a database of hospitals and clinics that are capable of receiving and treating radiation patients.
	RE.2	Enabling environment in place for management of radiological and nuclear emergencies	**3**	

Scores: 1=No capacity; 2=Limited capacity; 3=Developed capacity; 4=Demonstrated capacity; 5=Sustainable capacity.

PREVENT

NATIONAL LEGISLATION, POLICY AND FINANCING

INTRODUCTION

The International Health Regulations (IHR) (2005) provide obligations and rights for States Parties. In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even if new or revised legislation may not be specifically required, states may still choose to revise some regulations or other instruments in order to facilitate IHR implementation and maintenance. Implementing legislation could serve to institutionalize and strengthen the role of IHR (2005) and operations within the State Party. It can also facilitate coordination among the different entities involved in their implementation.[2] In addition, policies that identify national structures and responsibilities as well as the allocation of adequate financial resources are also important.

> **Target**
>
> *Adequate legal framework for States Parties to support and enable the implementation of all their obligations and rights made by the IHR. Development of new or modified legislation in some States Parties for the implementation of the Regulations. Where new or revised legislation may not be specifically required under a State Party's legal system, the State may revise some legislation, regulations or other instruments in order to facilitate their implementation in a more efficient, effective or beneficial manner. States Parties ensure provision of adequate funding for IHR implementation through the national budget or other mechanisms. Country has access to financial resources for the implementation of IHR capacities. Financing that can be accessed on time and distributed in response to public health emergencies, is available.*

LEVEL OF CAPABILITIES

Georgia has a well-established legal framework for the implementation of the IHR (2005). The broad framework is based on four legislative acts that respectively address health care, public health, civil security, and emergency situations. These acts are supported by subordinate acts that approve plans, such as the National Security Plan, and systems, such as surveillance systems and procedures at borders.

In 2014, health was determined a priority area by the Government, which released the Health Priorities 2014–2020. These priorities comprise 10 packages covering all aspects of health care. Approximately 8–10 new acts are developed per year. POEs are covered under a decree of sanitary–quarantine measures and controls on borders and customs.

Veterinary health is also covered under existing legislation, with laws including Decree 368 covering specific animal diseases, quarantine, diagnostics and information standards. These laws, regulations and acts have been validated by the European Union (EU) and the OIE.

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2 https://www.who.int/ihr/legal_issues/legislation/en/

A government decree was developed for the financing of response to Crimean–Congo haemorrhagic fever (CCHF), which was a joint programme run by the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs (MOH), and the Ministry of Environment Protection and Agriculture (MEPA). This programme covered the education of farmers and vector surveillance in endemic zones. During CCHF outbreaks the MEPA works on the control of ticks.

The food sector is also well covered with regulations addressing sanitary assessment criteria including the disposal of animal waste and the use of steroids in animals. Antimicrobial resistance is covered by the *Antimicrobial Resistance National Strategy 2017–2020* and by several decrees, including those on surveillance of nosocomial infections and the establishment of the National Coordination Council of Infection Prevention and Control and Antimicrobial Resistance.

The National Centre of Disease Control and Public Health (NCDC) has a budget line specifically for implementing IHR capacities, as does the MEPA. These funds are disseminated in a timely manner. These are the only ministries that have dedicated funding for IHR implementation.

For emergency response, many agencies have budget lines at national and regional levels. Additional funding can be transferred from regular programmes. For longer term responses, ministries can apply to the cabinet of ministers, the Office of the President or to humanitarian aid for emergency funds.

Indicators and scores

P.1.1 The State has assessed, adjusted and aligned its domestic legislation, policies and administrative arrangements in all relevant sectors to enable compliance with the IHR – Score 3

Strengths and best practices

- Georgia has legislation and/or administrative decrees for specific areas of the IHR (2005).
- The NCDC is designated as the IHR national focal point (NFP) and is able to communicate with the WHO contact point and with national stakeholders at all times.
- Existing IHR-relevant regulations include the *Law on Public Health; the Healthcare Law; Ordinance of the Government on Approving Rule of Functioning of Integrated National Surveillance System on Infectious Diseases;* legislation defining the IHR NFP designation and operations; and a Government Decree on sanitary–quarantine measures and controls on borders and customs.

Areas that need strengthening and challenges

- Communication mechanisms between the IHR NFP and IHR-relevant non-health sectors (e.g. the chemical and radiological sectors) should be improved.
- There is a need to regulate the legislative basis and responsible agency or agencies for qualitative environmental norms affecting human health and safety (e.g. on vibration, electromagnetic radiation, etc.).
- Georgia should fulfil the obligations of its association with the EU in the field of chemical, biological, radiological and nuclear risks.

P.1.2 Financing is available for the implementation of IHR capacities – Score 3

Strengths and best practices

- IHR implementation is a priority activity of the Georgian health care system and is included in the *2018–2022 NCDC Strategic Plan.*
- There is a budget line within the MOH (specifically within the NCDC budget) for activities related to strengthening IHR core capacities. Activities to support IHR implementation are financed by the relevant ministries.
- There is timely distribution of funds for the execution of national activities to strengthen and maintain IHR capacities.

- The *National Security Plan* includes budget planning and development, as well as defining the functions of leading and supporting agencies during emergencies, their responsibilities, and their coordinating mechanisms.

Areas that need strengthening and challenges

- Only the MOH and the MEPA have special budget lines for activities related to strengthening IHR core capacities. These activities should be included in the budgets of all relevant bodies.

- There is a need for further coordination of the state and private sectors and the management of financial flows during significant increases in seasonal flu cases in December–January.

P. 1.3 A financing mechanism and funds are available for the timely response to public health emergencies – Score 3

Strengths and best practices

- Diagnosed cases of influenza and measles requiring hospitalization are reimbursed under the framework of universal health care and state referral services.

- In public health emergencies, the budgets of MOH and other responsible ministries and agencies are used in the first instance. If necessary, Presidential and Prime Ministerial reserved funds are used. Private and international assistance is coordinated through the MOH.

- The *National Security Plan* defines mechanisms for rapid distribution of resources for response to public health emergencies, superseding public financing mechanisms, and handles the allocation and distribution of public funds for all non-emergency cases.

- The Emergency Situations Coordination and Urgent Assistance Centre (ESCUA) is a public entity with resource-raising responsibilities when a public health emergency occurs.

- The MOH Sector Action Plan for Emergencies includes mechanisms for the rapid deployment of funds allocated for public health emergencies, making it possible to contract human resources and procure equipment, supplies and commodities quickly in an emergency.

- The ESCUA carries out real time monitoring during responses to public health emergencies. It communicates changing resource needs for the response to the entities that coordinate the distribution of finances between sectors, levels and geographical areas of the country.

- Medical care is provided free during emergency situations to reduce complications and encourage health-seeking behaviour.

Areas that need strengthening and challenges

- Within the MOH, funding of responses to public health emergencies is scattered across various state programmes.

- For better coordination and timely disposal of funds, it is desirable that all relevant ministries have a separate budget line for implementing emergency measures, which should then be coordinated through the emergency management system.

Recommendations for priority actions

- Review existing legislation on chemical and radiological issues to ensure it is in line with the IHR (2005) and relevant European Union legislation.

- Clarify the allocation of financial resources for emergencies, and develop operating procedures to coordinate funding for use in emergencies.

IHR COORDINATION, COMMUNICATION AND ADVOCACY

INTRODUCTION

The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for efficient alert and response systems. Coordination of nationwide resources, including the designation of an IHR NFP, and adequate resources for IHR implementation and communication, is a key requisite for a fully functioning IHR mechanism at country level.

> ### Target
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> *Multisectoral/multidisciplinary approaches through national partnerships that allow efficient alert and response systems for effective implementation of the IHR. Coordinate nationwide resources, including sustainable functioning of an IHR National Focal Point – a national centre for IHR communications which is a key obligation of the IHR – that is accessible at all times. States Parties provide WHO with contact details of IHR National Focal Points, continuously update and annually confirm them.*

LEVEL OF CAPABILITIES

After significant organizational and structural changes, public health has been integrated into different sectors in Georgia. Animal health and food safety are the responsibility of the MEPA; epidemiological control is overseen by POEs and the Revenue Service of the Ministry of Finance; and public health functions at national (NCDC) and municipality levels come under the MOH. Public health centres (PHCs) only implement the policy and recommendations of the NCDC, but are under the authority of the municipalities.

The NCDC is the designated IHR NFP in Georgia. The IHR NFP is accessible at all times for communication with WHO IHR contact points and with the national surveillance and response system. There is a duty officer in place 24/7.

Georgia has been a member of the Global Health Security Agenda (GHSA) since 2014, a membership that has inspired its work on health security and health preparedness. Georgia is contributing to the Zoonotic Diseases and National Laboratory Systems Action Packages and leading the Surveillance Action Package of GHSA. Georgia is also active in contributing to regional disease surveillance, and is chairing the Biosurveillance Network of the Silk Road (BNSR).

Georgia has developed a *National Action Plan for IHR Implementation (2009–2012)* to describe activities and indicators necessary for the full implementation of IHR (2005) in the country, to define the roles and responsibilities of all relevant stakeholders, and to serve as a monitoring and evaluation tool. Georgia reported to WHO that the IHR (2005) had been implemented by 2012, as requested, and did not ask for an extension. The IHR (2005) are considered an international convention and are implemented in several of Georgia's laws and regulations, including the *Law on Public Health;* the *Healthcare Law;* the *Ordinance of the Government on Approving Rule of Functioning of Integrated National Surveillance System on Infectious Diseases (#336, 2015);* and *Governmental Decree N428* on sanitary–quarantine measures and controls on borders and customs. There is a good connection between the national integrated surveillance system and a well-established laboratory system.

The IHR NFP is placed at a high enough level within the Government to facilitate its role, and has participated in multisectoral exercises to evaluate effective responses. Mechanisms for coordination during emergencies are in place and the NCDC has dedicated staff for IHR implementation. In case of a national emergency, the roles and responsibilities of different sectors are defined under the *National Security Plan,* which is coordinated by the Prime Minister of Georgia. A Public Health Emergency Preparedness and Response Division was established at the NCDC in 2016.

There is a need to strengthen the established communication mechanism between the IHR NFP and IHR-relevant non-health sectors (e.g. the chemical and radiological sectors), as well as to improve advocacy for the IHR (2005) to ensure an all-hazards national approach. In some instances, communication relies too much on personal communication, and there is still a lack of IHR awareness in many sectors. Lessons from emergencies should be regularly incorporated into action plans, and Georgia should use after-action reviews more actively to learn from smaller and bigger incidents.

Indicators and scores

P.2.1 A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR – Score 3

Strengths and best practices
- An IHR implementation plan was developed and implemented from 2009 to 2012.
- The NCDC is the designated IHR NFP and is able to communicate with WHO contact points and with national stakeholders 24/7.
- The IHR NFP is placed at a high enough level within the Government to facilitate its role.
- The IHR NFP has participated in multisectoral exercises to evaluate responses.
- Regulations are developed and adapted to facilitate IHR-related communication, coordination and information sharing.
- A coordination mechanism for emergencies is in place.
- The NCDC has a dedicated division and staff for IHR implementation.
- The roles and responsibilities of different sectors are defined in the *National Security Plan* and coordinated by the Prime Minister.
- A Public Health Emergency Preparedness and Response Division was established at the NCDC in 2016.

Areas that need strengthening and challenges
- There is a need to strengthen the established communication mechanisms between the IHR NFP and IHR-relevant non-health sectors.
- There is a need to strengthen IHR advocacy to ensure an all-hazards approach.
- Lessons from emergencies should be integrated into action plans.

Recommendations for priority actions
- Improve the information exchange mechanism between the IHR NFP and non-health sectors.
- Increase IHR awareness and enhance advocacy measures across sectors.
- Strengthen training and recruitment of the IHR-relevant workforce in all sectors and at all levels.

ANTIMICROBIAL RESISTANCE

INTRODUCTION

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, the problem was manageable as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics.

Over the past decade, however, this problem has become a crisis. Antimicrobial resistance is evolving at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security and national security.

> ### Target
>
> *A functional system in place for the national response to combat antimicrobial resistance (AMR) with a One Health approach, including:*
>
> *a) Multisectoral work spanning human, animal, crops, food safety and environmental aspects. This comprises developing and implementing a national action plan to combat AMR, consistent with the Global Action Plan (GAP) on AMR.*
>
> *b) Surveillance capacity for AMR and antimicrobial use at the national level, following and using internationally agreed systems such as the WHO Global Antimicrobial Resistance Surveillance System (GLASS) and the OIE global database on use of antimicrobial agents in animals.*
>
> *c) Prevention of AMR in health care facilities, food production and the community, through infection prevention and control measures.*
>
> *d) Ensuring appropriate use of antimicrobials, including assuring quality of available medicines, conservation of existing treatments and access to appropriate antimicrobials when needed, while reducing inappropriate use.*

LEVEL OF CAPABILITIES

Georgia has strong expertise and well-organized national structures in the fields of antimicrobial resistance (AMR) and infection prevention and control (IPC). The problem of AMR is well recognized at the highest levels of governance.

A functional infrastructure for AMR surveillance is in place and includes a national reference laboratory, the Lugar Centre, which conducts education and capacity building, and which organizes external quality control for antimicrobial susceptibility testing.

The NCDC is the national coordinating centre for AMR surveillance. National surveillance programmes for antimicrobial resistance and health care-associated infections (HCAIs) have been initiated, and the standards of the European Committee on Antimicrobial Susceptibility Testing (EUCAST) have been accepted for antimicrobial susceptibility testing.

Well-developed international and regional cooperation is another strength, and is seen in policies for AMR, surveillance of AMR and IPC, and antimicrobial stewardship.

The main challenges in this area are that most health care is provided by the private sector, and there is a strong need for educational activities for professionals working in IPC, health and veterinary work. In addition, there is a need for further regulation of the veterinary sector, including authorization of veterinarians, mandated prescription for antibiotic use in animals, and a ban on the use of antibiotics for growth promotion in animals.

The lack of adequate funding is another recurring challenge.

Indicators and scores

P.3.1 Effective multisectoral coordination on AMR – Score 3

Strengths and best practices
- There is coordinated collaboration of the institutions subordinated to the MOH and the MEPA.
- The National AMR Strategy for 2017–2020 is being implemented.
- Joint AMR meetings and discussions are held at least twice a year.
- National Animal Health Programme Steering Committee meetings are held regularly.

Areas that need strengthening and challenges
- The sharing of AMR data, joint action and research all need to be improved.
- Awareness and understanding of AMR needs to be improved using communication, education and training.
- Medical personnel lack knowledge on AMR and antibiotic usage.
- Knowledge and evidence on AMR need to be strengthened through surveillance and research on AMR in medicine, veterinary work, food and the environment.
- The use of antimicrobial medicines in human and animal health should be optimized through the development of a national antimicrobial stewardship programme for human and animal health. A prescription system for veterinary medicine should be implemented.
- Actions within AMR and IPC need to be adequately financed.
- National guidelines for managing AMR in veterinary medicine need to be drafted and implemented.
- Good hygiene practices and biosafety guidelines need to be developed.

P.3.2 Surveillance of AMR – Score 2

Strengths and best practices
- There is a state programme on surveillance of AMR and nosocomial infections.
- There is an AMR National Laboratory Network.
- Georgia participates in international surveillance networks, such as WHO's Global Antimicrobial Resistance Surveillance System (GLASS), Central Asian and Eastern European Surveillance of Antimicrobial Resistance (CAESAR) and the Baltic Antibiotic Resistance Collaborative Network (BARN).
- Coordination through a national reference laboratory is in place.
- The National Food Agency (NFA) has worked out a control strategy for the use of veterinary drugs and other residues.
- The quality of veterinary drugs, including antibiotics, is monitored.
- A proof of principle study for AMR surveillance has been carried out.
- EUCAST has been accepted as a standard for antimicrobial susceptibility testing.
- There is ongoing collection and sharing of AMR data.

- A study on the quality of veterinary drugs was carried out in 2014; a study of prohibited antibiotics in live animals was carried out in 2017; and a study of veterinary antimicrobial drugs and other residues in food of animal origin was carried out in 2015.
- Georgia reports annually to the OIE on antimicrobial agents used in animals.

Areas that need strengthening and challenges
- Local laboratory capacity needs to be strengthened.
- Awareness on AMR and antibiotics needs to be increased.
- An increased budget for AMR surveillance is necessary.
- Surveillance of AMR in primary health care is lacking.
- The use of veterinary drugs is not controlled.
- There is no national reference laboratory for veterinary medicine.
- Medical and veterinary personnel lack knowledge on AMR and antibiotic usage.
- Surveillance of AMR needs to be adequately financed.
- Registration and quality control of food supplements is needed.
- The mechanism of spread of AMR in the veterinary sector needs to be investigated.

P.3.3 Infection prevention and control – Score 2

Strengths and best practices
- Certain components of IPC at national level are represented in the AMR national strategy and in the hepatitis C elimination programme.
- A national plan for monitoring and evaluation of IPC in health care settings has been developed and implemented.
- Modular training programmes in IPC for medical personnel have been developed and conducted.
- A new national guideline on IPC has been developed, there are IPC committees in all hospitals, and most hospitals have developed local IPC plans. IPC plans in health care facilities include guidelines and procedures for prevention of airborne transmission. Every hospital has an epidemiologist and/or an IPC specialist.
- Under the strategic plans, several disease-specific long-term control programmes have been developed (e.g. for brucellosis, foot and mouth disease and rabies). Yearly action plans for controlling animal diseases are developed and implemented in parallel. Action plans include those for vaccination, disease surveillance, sample collection, biosafety, disinfection, post-vaccination monitoring, animal identification and traceability, and animal movement control. Based on the action plans, general and disease-specific guidelines and SOPs have been developed for standardization of activities (including SOPs for notification to the OIE World Animal Health Information System (WAHIS)).
- There are state-budgeted vaccination campaigns for major zoonoses and transboundary animal diseases in Georgia. An animal identification and registration programme (NAITS) covers large and small ruminants, and there is a pilot programme for pigs. For conducting vaccination and animal identification campaigns, the NFA contracts about 650 veterinarians throughout the year. This also contributes to the surveillance system as contracted veterinarians travel from holding to holding to provide vaccinations, and at the same time bring public awareness to farmers.

Areas that need strengthening and challenges
- There is a need for a national IPC programme and strategy for human health that includes defined national goals and strategies.
- There is no national or subnational programme of continuing professional training for health workers that includes key guiding principles of IPC and water, sanitation and hygiene (WASH).
- National guidelines for IPC in animal production are not available.

- Georgia has a large number of hospitals (more than three hundred).
- There is a lack of personnel qualified in hospital epidemiology and IPC.

P.3.4 Optimize use of antimicrobial medicines in human and animal health and agriculture – Score 1

Strengths and best practices

- The Sanford Guide to Antimicrobial Therapy (2018) has been translated and published.
- An accredited educational course on the rational use of antibiotics has been developed.
- Correct prescription of antibiotics in hospitals is monitored by the IPC groups created by the MOH and NCDC.
- Information on imported antibiotics for humans is collected by the Antimicrobial Medicines Consumption network.
- Pre-operative antibiotic prophylaxis is implemented in hospitals.
- Some hospitals have their own antimicrobial therapy programme.
- Georgia participates in the World Antibiotic Awareness Week campaign every year.
- The prescription system is being surveyed.
- There is no national policy on use of antimicrobials for animal growth promotion, but several related steps are planned for the next three years, including:
  - Establishment of registration for imported animal feed.
  - Registration and authorization of veterinarians to issue prescriptions on antimicrobials.
  - Implementation of detailed recording of imported raw materials of antimicrobials.
- Sixty veterinarians in the private and state sectors were given a seminar on AMR, to improve awareness.
- Work is being done on the legislative basis for control of locally produced and imported animal feed.

Areas that need strengthening and challenges

- National guidance on appropriate use of antibiotics in humans has not been developed.
- There is no regulation for appropriate use of antimicrobials in animal health.
- Since registration and authorization of veterinarians is currently not done, there is no system to issue prescriptions in animals.
- There is no registration of antibiotics consumed in hospitals, and most hospitals do not collect information on consumed antibiotics.
- Prescription is not mandatory for use of antibiotics in animals, and farmers have direct access to antimicrobials.

PREVENT

Recommendations for priority actions

- Optimize the use of antibiotics in animal health, making prescription mandatory for animal antibiotics and prohibiting their use as growth promoters.

- Improve awareness and understanding of AMR by using effective communication, education and training:

  - Develop a joint One Health workshop for food safety, veterinary and medical personnel to increase awareness around AMR and IPC.

  - Develop and distribute public awareness materials on human and animal aspects of AMR.

  - Increase the use of different media to inform the public on AMR, antibiotics, and infections.

- Prevent HCAIs by introducing effective IPC measures in human and animal health. Use the WHO Core Components to develop national guidelines and measure compliance.

- Develop and implement suitable methods to measure HCAIs and antibiotic resistance, report and discuss results in all professional groups at a facility level, and implement improvement actions based on results.

ZOONOTIC DISEASES

INTRODUCTION

Zoonotic diseases are communicable diseases that can spread between animals and humans. These diseases are caused by viruses, bacteria, parasites and fungi carried by animals, insects or inanimate vectors that aid in its transmission. Approximately 75% of recently emerging infectious diseases affecting humans are of animal origin; and approximately 60% of all human pathogens are zoonotic.

> ### Target
>
> *Functional multisectoral, multidisciplinary mechanisms, policies, systems and practices are in place to minimize the transmission of zoonotic diseases from animals to human populations.*

LEVEL OF CAPABILITIES

Georgia's competent authorities responsible for addressing zoonotic diseases are as follows: The NCDC/Lugar Centre conducts surveillance activities on zoonotic diseases among humans, monitors vectors and reservoirs (e.g. ticks, fleas, mosquitoes, rodents, etc.), provides diagnostic capabilities on selected zoonotic diseases and develops recommendations. The National Food Agency (NFA) of the Ministry of Environmental Protection and Agriculture conducts surveillance activities on zoonotic diseases among animals, implements preventive measures for selected zoonotic diseases, and develops recommendations. The Laboratory of the Ministry of Agriculture (LMA) provides diagnostic capabilities for selected zoonotic diseases.

The legal basis for intersectoral collaboration is defined by *Ministerial Decree #42/n-#2-22, 2010* (an agreement between the MOH and the MEPA on rules for exchanging zoonotic disease information using integrated national surveillance systems) and *Governmental Decree #336, 2015* (which approves rules for providing functional integrated surveillance of infectious diseases).

For the purposes of intersectoral consultation regarding zoonotic disease control, a National Animal Health Programme Steering Group was established in 2013 as a One Health team comprising the NFA, LMA, NCDC and other stakeholders and donors operating in Georgia. This group has developed a list of zoonotic diseases of greatest public health concern: brucellosis; anthrax; rabies; avian influenza; Crimean–Congo haemorrhagic fever (CCHF); poxvirus infections; diseases caused by typhus group Rickettsiae *(Rickettsia prowazekii);* Q fever; haemorrhagic fever with renal syndrome; tularaemia; and plague.

A National Animal Health Programme has been developed by the NFA. Surveillance of zoonotic disease is based on both passive and active (brucellosis) surveillance systems and a vaccination programme has been implemented for brucellosis, anthrax and rabies. Apart from some research projects (e.g. on rabies in bats) there has been no official surveillance programme for zoonotic diseases in wildlife. This provides an opportunity for more intensive involvement of MEPA as a competent authority for wildlife, and for closer collaboration with NFA on development and implementation of zoonosis surveillance and control programmes.

A vaccination programme is in place for humans with high risk of exposure to rabies (e.g. hunters, veterinarians, etc.) and tularaemia (laboratory staff), regulated by *Ministerial Decree #01-57/N.*

In the human surveillance system, passive surveillance is in place for all zoonotic diseases and active surveillance is conducted in accordance with the epidemiologic situation. Whenever a human case of zoonosis is detected, health care facilities at the local level notify epidemiologists in district PHCs via

phone (as defined by the O*rder No. 01-2 /N.—Regulations on the production and delivery of medical statistical information*). A PHC epidemiologist conducts an initial epidemiological investigation and enters information into the Electronic Integrated Disease Surveillance System (EIDSS), which ensures the exchange of information in real-time between the health care and veterinary sectors.

There are 194 veterinary and public health data entry sites throughout the country. In cases of zoonotic or foodborne disease, the NFA is notified according to *Governmental Order #336—Functioning of integrated national surveillance system on infectious diseases.* Since the EIDSS system has a laboratory module, it is used for sharing information between public health and animal health laboratories.

One good example of efficient intersectoral collaboration resulting in decreases of human cases has been in response to CCHF: after outbreaks in the human population, the NCDC informed the NFA, which responded by treating animals and holdings with acaricides in infected villages, leading to a fivefold decrease in CCHF incidence. No cases have been reported in infected villages since these control measures were implemented. Animal vaccination programmes for anthrax (since 2012) and rabies (since 2013), have been developed and implemented by the NFA, leading to an absence of any incidence in the human population between 2015 and 2017. In 2018, however, there were two cases of rabies in humans.

The NFA has contingency plans for some zoonotic diseases including avian influenza (which needs to be updated) and brucellosis. Further contingency plans are in the draft phase (for rabies and anthrax), and a general contingency plan for responses to disease outbreaks is also under development. A multisectoral approach to the development and review of these plans will be ensured by the consultation process within the National Animal Health Programme Steering Group.

There is no mechanism for joint risk assessment for zoonotic disease events, but a joint risk assessment pilot mission has been scheduled for July 2019.

Veterinary and public health services have conducted joint public awareness campaigns on rabies, CCHF and anthrax. These included distribution of educational materials on zoonotic diseases among ethnic minorities.

Indicators and scores

P.4.1 Coordinated surveillance systems in place in the animal health and public health sectors for zoonotic diseases/pathogens identified as joint priorities – Score 4

Strengths and best practices
- Georgia has a jointly operated EIDSS system that allows data sharing in real-time.
- A list of agreed major priority diseases has been established.
- Legislation is in place regarding notifiable animal and human diseases.
- There are good intersectoral communication mechanisms between the human and animal sectors at central level (through the National Animal Health Programme Steering Group).
- Georgia conducts joint responses to outbreaks and joint awareness raising campaigns.

Areas that need strengthening and challenges
- There is a need to improve education on zoonotic risk for health care providers, public health personnel, veterinarians and the general population.
- Communication between the Laboratory Information Management System (LIMS) and EIDSS should be improved.
- Coordinated fieldwork should be carried out for the optimal use of resources for vector monitoring and control.
- There is a lack of joint One Health reports.

- There is insufficient interaction between the human medical and veterinary sectors in rural areas.

- Joint awareness campaigns are required.

- More wildlife data is needed.

P.4.2 Mechanisms for responding to infectious and potential zoonotic diseases established and functional – Score 3

Strengths and best practices

- Georgia conducts joint planning for control and prevention of endemic zoonotic diseases during outbreaks.

- Georgia has conducted joint responses to CCHF and brucellosis outbreaks.

- Contingency plans are in place for some priority zoonotic diseases.

Areas that need strengthening and challenges

- There is a need to conduct planning (joint risk assessments) for emerging and re-emerging diseases at the human–animal–ecosystem interface.

- There are no early warning and rapid alert systems in place.

- There is no comprehensive joint strategy for responding to infectious and potential zoonotic diseases.

- There is a need for further development of multisectoral training programmes for specialists on zoonotic diseases, risks and rapid response.

- There is a lack of interaction between medical doctors and veterinarians in rural areas.

Recommendations for priority actions

- Develop and implement a compensation scheme in the animal sector, along with One Health public awareness campaigns, to encourage reporting of suspicions around priority zoonoses.

- Develop procedures and provide One Health training to veterinarians and medical doctors in local and rural areas, to improve collaboration.

- Organize nationwide awareness campaigns to improve One Health collaboration in rural areas.

- Competent authorities for public health, animal health and wildlife should jointly review coordinated surveillance systems and mechanisms for responding to infectious and potential zoonotic diseases, using the *WHO/FAO/OIE Tripartite Guide to Addressing Zoonotic Diseases in Countries.*

- Train public health centre epidemiologists, medical doctors and veterinarians in routine collection of risk factor data.

FOOD SAFETY

INTRODUCTION

Foodborne and waterborne diarrhoeal diseases are leading causes of illness and death, particularly in less developed countries. The rapid globalization of food production and trade has increased the potential likelihood of international incidents involving contaminated food. The identification of the source of an outbreak and its containment is critical for control. Risk management capacity with regard to control throughout the food chain continuum must be developed. If epidemiological analysis identifies food as the source of an event, based on a risk assessment, suitable risk management options that ensure the prevention of human cases (or further cases) need to be put in place.

Target

A functional system is in place for surveillance and response capacity of States Parties for foodborne disease and food contamination risks or events with effective communication and collaboration among the sectors responsible for food safety.

LEVEL OF CAPABILITIES

The competent authorities responsible for food safety in Georgia are as follows: the NCDC; the public health centres of municipalities/offices; the MEPA and its agencies; the NFA and its territorial entities; the Laboratory of the Ministry of Agriculture (LMA); the Scientific-Research Centre of Agriculture (Risk Assessment Service); and the Revenue Service of the Ministry of Finance. A legislative foundation is provided by the *Law of Georgia Code on Food/Feed Safety, Veterinary and Plant Health Protection N 6155-IS, 8 May 2012*, which clearly identifies the roles and responsibilities of the listed competent authorities.

The food production chain is regulated by the *Code on Food/Feed Safety, Veterinary and Plant Health Protection,* for the entire continuum from primary production through processing to distribution. It requires compliance with all aspects of food safety, hygiene, marketing and recall. All food business establishments (FBEs) must be registered according to this code, and in addition to registration, those engaged in the production of food of animal origin are also subject to approval by the NFA. Slaughterhouses and dairy processing plants are obliged to have implemented good management practice (GMP) and food safety management systems based on the principles of HACCP (Hazard Analysis Critical Control Points). The NFA plans to introduce these requirements for other FBEs as well.

Animal identification and registration systems are in place for ruminants and the pilot phase is underway for porcine animals. Food business operators (FBOs) are obliged to ensure traceability of products. Recall from the marketplace of products potentially harmful for humans or animals is legislated in the above-mentioned code and is the responsibility of FBOs and the NFA.

The NFA has an official risk-based control plan in place, according to which FBEs are categorized as high-, medium- and low-risk establishments. This determines the frequency of their control by the NFA. Slaughterhouses are categorized as high-risk establishments and each one must have a contract with NFA, by which an official veterinarian is assigned to the establishment to perform ante- and post-mortem inspections, as well as inspection of infrastructure and hygiene requirements and verification of GMP and the HACCP plan.

The NFA monitors chemical and microbiological hazards in accordance with the annual programme approved by the MEPA. This takes into consideration any available reports of foodborne incidents in the human population when developing its residue and microbiology monitoring programmes, but does not consult public health authorities.

PREVENT

The NFA is developing a programme to detect, prevent and control salmonella in poultry, and a surveillance programme for bovine spongiform encephalopathy (BSE).

There is no food safety contingency plan in case of an outbreak of foodborne disease, and there is no permanent team at the national and/or subnational level that can rapidly assess foodborne events.

A mechanism is in place for information exchange between the NFA and the NCDC during foodborne outbreaks or events. Once the NFA receives official information on three or more cases of foodborne disease in the human population, specialists from regional divisions of the NFA respond to the outbreak. Responders are authorized to undertake outbreak investigations of foodborne diseases, have graduated from medical university and have specializations in epidemiology or sanitary science. The inspectors of the Food Safety Agency, who undertake foodborne outbreak responses, are trained in procedures for sampling from food, with water probes, and using swabs from equipment. They are also trained in rules for transporting samples to laboratories. If a serious risk to human health exists that cannot be prevented using the NFA's own means and resources, it will suspend placement of food, provide timely information to the public and take other appropriate emergency measures.

Georgia has laboratories that perform the necessary testing in foodborne outbreaks. If the LMA does not have the capacity to investigate the causative agent identified in patients, the NFA collaborates with the NCDC and laboratory testing is provided by the Lugar Centre.

Georgia has an active INFOSAN Emergency Contact Point and an OIE National Focal Point on Animal Production Food Safety. Georgia is involved in RASFF (Rapid alert System for Food and Feed), which enables swift reactions to risks to public health detected in the food chain in the EU. The RASFF contact point is located in the NFA.

Indicators and scores

P.5.1 Surveillance systems in place for the detection and monitoring of foodborne diseases and food contamination – Score 2

Strengths and best practices
- Georgia has procedures for mandatory registration of FBEs and approval for products of animal origin.
- A risk-based official control plan has been developed and implemented by the NFA.
- The NFA has a MEPA-approved residue and microbiology monitoring programme in place.
- Slaughterhouses are obliged to have an HACCP system in place and an official veterinarian designated by the NFA to perform ante- and post-mortem inspections.
- NFA inspectors have the relevant skills for managing foodborne diseases, are trained in sampling procedures for food, water and equipment, and are trained in the rules for transporting samples to laboratories.
- A food contamination monitoring system is in place.
- Georgia has qualified staff with relevant skills to manage food safety.

Areas that need strengthening and challenges
- Food inspectors require more training on managing outbreaks of foodborne disease or contamination events alongside NCDC epidemiologists.
- Funds should be allocated to enable the NFA to develop and implement planned programmes to detect, prevent and control salmonella in poultry, and implement its BSE surveillance programme.
- NFA and NCDC staff should conduct joint operational activities.
- There is no permanent national or subnational team that can rapidly assess foodborne events.
- Representatives from food safety and other laboratories are not routinely part of outbreak response teams.

- There is no standard operating procedure (SOP) to undertake investigations of foodborne disease outbreaks.
- Food inspectors do not have the legal right to sample suspected food in unregistered establishments.

P.5.2 Mechanisms are established and functioning for the response and management of food safety emergencies — Score 2

Strengths and best practices

- Georgia has an active International Food Safety Authorities Network (INFOSAN) Emergency Contact Point and OIE National Focal Points on animal production and food safety.
- Georgia is involved in RASFF and has a RASFF contact point at the NFA.
- A coordination mechanism is in place. Epidemiological, veterinary and laboratory data are integrated in EIDSS.
- NFA food inspectors have relevant qualifications and are trained in sampling procedures.

Areas that need strengthening and challenges

- Response procedures for food safety emergencies are divided between different agencies. This requires unification and systematization through the development of a national food safety contingency plan.
- Regular exercises on traceability of animal products back to their farms of origin should be introduced to enhance preparedness for rapid responses.
- A permanent outbreak response team should be established at national and subnational levels.
- Key partners and stakeholders are only partially aware of their roles and the response procedures required in food safety emergencies. No instruction or explanation has been provided regarding response procedures.
- The flow of foodborne disease information in EIDSS does not involve other relevant sectors such as tourism, national security, environmental services, etc.
- Key stakeholders do not have practical experience of a food safety crisis or emergency. Simulation exercises are needed.
- There is no national mechanism in place ensuring the gathering and sharing of relevant information for joint evaluation.
- There is a need to improve the rapid information exchange mechanism used during suspected foodborne disease outbreaks or joint event investigations by the NFA and NCDC.
- There is no systemic approach to recording and analysing the lessons of past emergencies.

Recommendations for priority actions

- Develop and adopt a multisectoral national food safety contingency plan.
- Develop and implement training programmes for health workers and food inspectors on managing contamination events and outbreaks of foodborne disease.
- Strengthen early warning systems by including food safety issues in the EIDSS system.
- Establish and equip a foodborne outbreak response team.
- Develop and implement a public awareness campaign on food handling.

BIOSAFETY AND BIOSECURITY

INTRODUCTION

It is vital to work with pathogens in the laboratory to ensure that the global community possesses a robust set of tools – such as drugs, diagnostics and vaccines – to counter the ever-evolving threat of infectious diseases.

Research with infectious agents is critical for the development and availability of public health and medical tools that are needed to detect, diagnose, recognize and respond to outbreaks of infectious diseases of both natural and deliberate origin. At the same time, the expansion of infrastructure and resources dedicated to work with infectious agents have raised concerns regarding the need to ensure proper biosafety and biosecurity to protect researchers and the community. Biosecurity is important in order to secure infectious agents against those who would deliberately misuse them to harm people, animals, plants or the environment.

> ## Target
>
> *A whole-of-government multisectoral national biosafety and biosecurity system with dangerous pathogens identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach conducted to promote a shared culture of responsibility, reduce dual-use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing and pathogen control measures in place as appropriate.*

LEVEL OF CAPABILITIES

Georgia's biosafety and biosecurity system was described only for the infectious diseases sector; there was insufficient information available for the JEE team to assess the handling of (bio)toxins. This has been addressed in the priority actions.

The assessment was mainly focused on the Public Health Laboratory, comprising the NCDC, the Lugar Centre, and nine regional laboratories. These laboratories are equipped with appropriate biosafety equipment. In addition, the Ministry of Agriculture has a further laboratory network (the Laboratory of the Ministry of Agriculture, or LMA), which has 11 laboratories across the country, also appropriately equipped. These laboratories have implemented high biosafety standards, according to existing legislation. With the exception of the Lugar Centre, which was visited by the JEE team, the assessment of laboratories was based on information provided by Georgian colleagues.

Little information was available, however, on the implementation of biosafety in a large number of existing private clinical laboratories and university research laboratories.

Containment laboratories of biosafety level 3 (BSL-3) exist at the Lugar Centre, in the LMA network, and at the Eliava Institute of Bacteriophage. The Eliava Institute was not included in the evaluation, and it is important that national oversight and control be extended across all sectors in the future.

Substantial logistic and financial efforts are made to implement continuous maintenance of biosafety related equipment.

All work on genetic engineering is prohibited in the country, and there is therefore no legislation on genetically modified organisms.

Existing legislation and protocols (the *Law on Public Health,* sanitary norms for working with biological agents, the *Code of Medical Waste Management,* nosocomial infections surveillance, and rules on prevention and control) mainly address biosafety rather than biosecurity. There is a substantial lack of legislation on biosecurity. While some elements of biosecurity, including assessment of dual use research of concern (DURC), are implemented in both public laboratory networks, awareness of biorisk management in other national level diagnostic and research laboratories seems poorly developed.

All work with especially dangerous pathogens (EDP) takes place at the Lugar Centre, and peripheral laboratories are obliged to send all such isolates to the Lugar Centre and to destroy any EDPs remaining on site. This ensures that a minimal number of laboratories are dealing with EDP. The culture of risk group 4 viruses is prohibited throughout the county. International cooperation agreements exist in this area.

Timely transportation of primary samples is realized according to national regulations, which are in compliance with international regulations on transportation of dangerous goods.

Biosafety training programmes, which also partially address biosecurity, are developed and implemented in the public network laboratories. Special training is provided on proper usage of personal protective equipment (PPE) in both laboratories and clinics, and this was intensified during the global Ebola crises and a recent outbreak of Crimean–Congo Haemorrhagic fever in Georgia. There are no mechanisms in place, however, to assess the implementation of biosafety and biosecurity legislation in laboratories outside the public sector. A major need for improvement, and a major challenge, lies in the need to implement legislation in all laboratories in the country, and to establish sustainable measures for control.

Indicators and scores

P.6.1 Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities) — Score 3

Strengths and best practices

- A comprehensive national biosafety and biosecurity system is being developed and is fully implemented in the laboratory networks of the NCDC and the LMA. Pathogen inventories are only stored in NCDC laboratories.
- The key laboratories of both networks have developed and implemented a comprehensive biosafety and biosecurity regulatory framework, which includes licensing.
- This framework also includes the development and implementation of pathogen control measures. Operational handling and containment failure reporting systems are finalized in the key laboratories, but should be improved in other relevant sectors.
- Dangerous pathogens and toxins are stored and handled in a single facility, the NCDC's Lugar Centre laboratory.
- Timely transportation of samples is implemented in accordance with international regulations for transport of dangerous goods.
- There are fully implemented tools and resources to support diagnostics that preclude culturing dangerous pathogens in peripheral laboratories. Culturing of EDP is forbidden in unlicensed laboratories.
- Incident and emergency, and response programmes are in place in both networks' key laboratories.

Areas that need strengthening and challenges

- There are no inventories for toxins.
- Further improvements in biosecurity are needed.
- The biosafety and biosecurity system must be extended to national level, and control instruments should be developed.

- This should also include the development and implementation of pathogen control measures and operational handling and containment failure reporting systems, which should be improved in other relevant sectors. Incident and emergency, and response programmes and processes are not currently implemented in all sectors.

P.6.2 Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture) — Score 2

Strengths and best practices

- Training programmes have been developed and implemented in the key laboratories of the NCDC and the LMA. Georgia has conducted a training needs assessment and identified gaps in biosafety and biosecurity training, but has not yet implemented comprehensive training.

- Georgia provides some academic training on work with dangerous pathogens. This is mainly focused on key laboratories.

Areas that need strengthening and challenges

- Comprehensive training on biosafety and biosecurity has not been implemented in laboratories of all relevant sectors.

- Outside the laboratories of the NCDC and LMA networks, there is a general lack of awareness among the laboratory workforce of international biosafety and biosecurity best practices for safe, secure and responsible conduct.

- Georgia does not yet provide sustained academic training that is proportionate to the assessed risks.

Recommendations for priority actions

- Establish and implement a mandatory system of biosafety and biosecurity laws and regulations, including in laboratories in the private and academic sectors, covering all kinds of biological material (infectious pathogens, toxins and plants). Existing biosafety legislation/regulations should be implemented in all sectors and not just the key laboratories of the NCDC and LMA networks.

- Establish and train central or regional controlling bodies, enabling them to perform their roles. They must be independent and funded by the state or under state control.

- Provide funding to support biosafety and biosecurity programmes/initiatives and their oversight and enforcement at ministry level.

- Develop a comprehensive biosecurity system.

- Develop a comprehensive biosafety and biosecurity training programme and make it mandatory for facilities working with infectious agents and toxins. It should also be provided as part of the training of academics and technical personnel.

IMMUNIZATION

INTRODUCTION

Immunizations are estimated to prevent more than two million deaths a year globally. Immunization is one of the most successful global health interventions and cost-effective ways to save lives and prevent disease. Measles immunization is emphasized because it is widely recognized as a proxy indicator for overall immunization against vaccine preventable diseases. Countries will also identify and target immunization to populations at risk of other epidemic-prone vaccine preventable diseases of national importance (e.g. cholera, Japanese encephalitis, meningococcal disease, typhoid and yellow fever). Diseases that are transferable from cattle to humans, such as anthrax and rabies, are also included.

Target

A national vaccine delivery system – with nationwide reach, effective distributions, access for marginalized populations, adequate cold chain and ongoing quality control – that is able to respond to new disease threats.

LEVEL OF CAPABILITIES

Access to immunization services is guaranteed throughout the country under the State Universal Healthcare Programme, and is regulated by *MOH Decree #01-57/n 19.11.2015* and the *Law on Public Health.*

The budget and activity of the National Immunization Programme (NIP) have increased dramatically since 2012, and the NIP now ensures high levels of coverage and high-quality services that meet global and regional targets. Partner organizations (including the United States Centers for Disease Control and Prevention (US CDC), WHO, the United Nations Children's Fund (UNICEF) and the Global Alliance for Vaccines and Immunization (Gavi)) have provided technical and financial support in various areas that have assisted the development of the NIP – though the programme is now in a period of graduation from dedicated Gavi funding.

The current schedule covers 12 infectious diseases: hepatitis B; tuberculosis; diphtheria; tetanus; pertussis; Haemophilus influenza type B infection; poliomyelitis; measles; mumps; rubella; and pneumococcal and rotavirus infection. New vaccines (for human papilloma virus infection and DTaP-IPV) will be introduced based on WHO's Global Vaccine Action Plan/GVAP. The NIP also ensures procurement, storage and distribution of vaccines and immunization supplies (including procurement and installation of cold chain equipment) from central to district level, for routine and supplementary activities. The NIP is capable of responding promptly to emerging outbreaks (as shown in the 2019 measles outbreak).

Georgia has also adopted a comprehensive *Multiyear Action Plan (2017–2021)* following the main goals of the *European Vaccine Action Plan.*

Coverage is tracked through the GEOVAC software, which provides countrywide and district aggregated data, and sends monthly reports to the NCDC. A 2015–2017 coverage survey was conducted as a quality control measure, and revealed some discrepancies between the information provided by GEOVAC and that found in the coverage survey – for example, some coverage figures do not match. A survey may be required for quality control purposes.

The web immunization registry is under development, with data entry functions almost completed and linked with a stock management module. Development of data cleaning and analytical functions is underway.

In 2002, Georgia was certificated as a country free from wild poliomyelitis virus. Seasonal influenza vaccination is provided for selected high-risk group populations according to WHO recommendations.

To assure uninterrupted supply and balanced costs, all routine immunization vaccines (except Hexavalent) are procured through UNICEF and by government decision. All vaccines procured for routine vaccination are WHO prequalified. The *Immunization Communication Strategy and Action Plan* and the *Crisis Communication Plan* were developed with Gavi, and with UNICEF support. The NCDC has also carried out knowledge, attitudes and practice (KAP) surveys among key stakeholders to recognize why and where vaccination does not occur.

Quality and uninterrupted functioning of the cold chain system are ensured by an effective vaccine management evaluation conducted with WHO technical support.

In a recent measles outbreak, Georgia showed its collaboration with neighbouring countries by sourcing vaccines from Armenia, in an agreement whereby Georgia's immediate needs were met with a loan of over 100 000 doses of vaccine so that the country could provide free vaccines to adults over 20 who had missed out on routine childhood vaccination. This loan will be repaid.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme – Score 5

Strengths and best practices

- The NIP provides all routine vaccines free of charge as well as specific serums/immunoglobulins for all Georgian citizens, permanent residents and inhabitants of occupied territories who are under 18, and for all the population in special situations (such as a measles outbreak).
- High vaccination coverage is sustained at the national level. Coverage of measles, mumps and rubella (MMR) vaccination for children under 12 months is >95% at all administrative levels.
- Mandatory vaccination has been recently introduced for relevant professional groups (personnel in health care, penitentiaries, veterinary and environmental health, defence, safety and emergency services, and the education system).
- In 2018, changes were made to Georgian Law on Public Health and the routine immunization schedule was redefined as mandatory; the ministries of health and education are to prepare the normative acts for implementation in June 2019.

Areas that need strengthening and challenges

- The coverage rate is generally high, but still below the national target of 95% for most antigens.
- There is a need to ensure sustainability of the national immunization programme after graduation from Gavi support.
- Georgia has adopted the European regional goal of achieving measles and rubella elimination, but substantial population susceptibility exists, as evidenced by recurring large-scale measles outbreaks.
- The immunization management module has been successfully linked with the stock management module in the trial web-based registry, although analytical functions and data quality control tools still need to be developed.

P.7.2 National vaccine access and delivery – Score 5

Although the score for this area is 5, it should be noted that there are no plans or systems in place to assess risk perception and improve public access to accurate information in order to counteract hesitancy to vaccinate, anticipate rumours and correct misinformation, thereby enabling key target groups (parents, health care workers, teachers, specific migrant groups, the unvaccinated population, and others) to take informed decisions.

Strengths and best practices

- The national vaccine store and four subnational stores (in Tbilisi city, Batumi, Kutaisi and Rustavi) are all equipped with computerized web-based temperature monitoring and alarm systems.

- All district PHCs have continuous temperature monitoring devices (Q-Tag).

- Vaccine storage capacity is sufficient for all planned new vaccine introductions.

- Vaccine management SOPs are under development.

Areas that need strengthening and challenges

- Some parts of the population do not get vaccinated, for a range of reasons including lack of confidence in health care workers, vaccine hesitancy, exclusion of ethnic minorities and population migration.

- There are no plans or systems in place to assess risk perception and improve public access to accurate information in order to counteract hesitancy to vaccinate, anticipate rumours and correct misinformation, thereby enabling key target groups (parents, health care workers, teachers, specific migrant groups, the unvaccinated population, and others) to take informed decisions.

- There is a need to develop integrated national regulations on storage of vaccines and pharmaceuticals requiring a cold chain. This should include development/adaptation of vaccine management SOPs.

- There is a need to ensure sustainability of all of the activities of the NIP when it graduates from partner funding. All anticipated programmatic support should be included in the state budget, and support should be provided in negotiations with vaccine manufacturers to maintain affordable prices.

Recommendations for priority actions

- Complete the pilot of the new immunization registry system and conduct a performance evaluation.

- Assuming the evaluation of the new immunization registry is positive, establish the registry nationwide and provide relevant education, training and ongoing mentoring.

- Establish the requirements for increased operational support to ensure continued operation of the immunization programme after graduation from Gavi support.

DETECT

NATIONAL LABORATORY SYSTEM

INTRODUCTION

Public health laboratories provide essential services including disease and outbreak detection, emergency response, environmental monitoring and disease surveillance. State and local public health laboratories can serve as a focal point for a national system, through their core functions for human, veterinary and food safety including disease prevention, control and surveillance; integrated data management; reference and specialized testing; laboratory oversight; emergency response; public health research; training and education; and partnerships and communication.

> **Target**
>
> *Surveillance with a national laboratory system, including all relevant sectors, particularly human and animal health, and effective modern point-of-care and laboratory-based diagnostics.*

LEVEL OF CAPABILITIES

The national laboratory system was described for infectious diseases. Private laboratories are in place throughout Georgia and provide analyses of food and chemicals. There is very limited or no capacity available for analyses of toxins or nuclear agents (see also technical areas on 'chemical events' and 'radiation emergencies'). There was insufficient information for the JEE team to be able to assess relevant private laboratories.

The key components of the national laboratory network for infectious disease are the NCDC, which maintains nine laboratories (two well-equipped BSL2 zonal diagnostic laboratories (ZDLs) and seven laboratory support stations (LSSs)), the Lugar Centre and the LMA, which consists of 11 laboratories (eight regional laboratories and three ZDLs). In addition, Georgia has the Eliava Institute of Bacteriophage, a National Centre for Tuberculosis and Lung Diseases, and an AIDS Infection Pathology and Clinical Immunology Centre. Georgia also has a large number of well-equipped private clinical laboratories, which could not be evaluated for their capacities and capabilities due to lack of information. The NFA uses private laboratory capacities for food analyses for infectious pathogens.

The network at NCDC contains BSL2-laboratories and one BSL3-laboratory at the Lugar Centre. The LMA and the Eliava Institute of Bacteriophage each have one BSL3-laboratory as well as a number of BSL2-laboratories.

The central reference laboratory in the Lugar Centre is focused on EDPs and measles/rubella, rotavirus, influenza, polio, hepatitis C, AMR and bacterial meningitis. As a reference laboratory, the Lugar Centre is equipped to carry out molecular epidemiology (through a genome centre with sequencing capabilities), bacteriology, serology and virology, and to act as a repository for EDPs.

Georgia prioritizes the following diseases in humans: measles–rubella; influenza and other respiratory viruses; hepatitis B and C, parenteral hepatitis; nosocomial infections and AMR; brucellosis; anthrax; CCHF and other haemorrhagic fevers; Lyme disease; leptospirosis; and diarrhoeal diseases.

DETECT

The prioritized diseases for the animal sector are: anthrax; avian influenza; Newcastle disease; African swine fever; classical swine fever; brucellosis; foot and mouth disease; lumpy skin disease; peste des petits ruminants; and leishmaniasis.

More than five of 10 core tests are in place in both the medical and the veterinary sectors. In addition, capabilities for other diseases, including malaria (*Plasmodium spp.*), are in place.

Primary analyses of samples are conducted at the NCDC and LMA network laboratories, and the Lugar Centre, serves as the reference laboratory capacity. Timely transportation of samples from peripheral to central laboratories is done by special car transportation in accordance with international regulations for transportation of dangerous goods, and through shipment using regular post.

Depending on the level of the laboratory in question, network laboratories have appropriate classical and advanced molecular methods in place. A quality assurance system is in place for the reference laboratory, and partially in place for other network laboratories.

No information could be provided on the capabilities of laboratories in the private and university sectors.

Indicators and scores

D.1.1 Laboratory testing for detection of priority diseases – Score 4

Strengths and best practices
- The national laboratory conducts more than the 10 core tests (up to 50 tests) and carries out antimicrobial susceptibility testing.
- Quality assurance systems are in place at the NCDC and LMA network laboratories.
- An internationally accepted national accreditation body is present in the country, and can accredit laboratories to international norms.

Areas that need strengthening and challenges
- More oversight of quality management is required for laboratories outside the NCDC and LMA networks, with particular focus on laboratories serving the NFA.
- There is a need for awareness raising on quality assurance and the implementation of appropriate measures in laboratories outside the NCDC and LMA networks.
- Quality control of AMR testing needs to be implemented and monitored in all testing laboratories.
- The quality assurance system and accreditation for medical and veterinary diagnostic laboratories should be implemented and monitored.

D.1.2 Specimen referral and transport system – Score 4

Strengths and best practices
- A system is in place to transport specimens from more than 80% of Georgia's intermediate level/district laboratories to national laboratories for advanced diagnostics.
- The specimen referral network is documented and sample referral guidelines exist for each priority disease.
- A tracking and documentation system is in place for specimen shipment and receipt.
- Emergency transportation capacity exists.
- Specimen transportation is performed through courier contracts as well as by the NCDC and LMA.

Areas that need strengthening and challenges
- Additional training is required at sample collection sites and for couriers.
- Electronic systems for sample tracking should be implemented.

D.1.3 Effective national diagnostic network – Score 4

Strengths and best practices

- Georgia has documented and fully implemented tier-specific diagnostic testing strategies and a national system is in place for sample referral and confirmatory diagnostics, culminating in performance of molecular or serological techniques in national and in some regional laboratories.
- Point-of-care/farm-based diagnostics for primary testing of clinical and veterinary samples respectively are used according to tier-specific diagnostic testing strategies for diagnosis of country priority diseases.
- An electronic integrated disease surveillance system (EIDSS) has been developed and implemented. It allows sharing of laboratory data on zoonotic diseases between human and animal health laboratories and between human and animal health epidemiologists.

Areas that need strengthening and challenges

- Diagnostic capacities and the quality of tests at the primary health care level should be further improved.
- A continuous education programme should be implemented in medical and veterinary laboratories.

D.1.4 Laboratory quality system – Score 3

Strengths and best practices

- A quality system is in place for the network laboratories of the NCDC and LMA, and includes conformity to a national quality standard.
- A Unified National Body for Certification and Accreditation (Accreditation Centre) is in place and is internationally accepted.
- Laboratories are partially accredited for specific diagnostic approaches by various national and international accreditation bodies.
- For some diseases, a National External Quality Assessment Programme (NEQAP) has been implemented.
- National regulations (basic requirements) exist for laboratory certification.

Areas that need strengthening and challenges

- The system of licensing laboratories that includes conformity to a national quality standard is voluntary and is not a requirement for laboratories outside the NCDC and LMA networks.
- The Quality Management System should be implemented in all NCDC network laboratories.
- Laboratory certification and accreditation requirements of national regulations should be expanded to the national level so that they reach all diagnostic laboratories in the human and animal sectors.
- A national agency for regular assessment of all clinical laboratories should be established to monitor compliance with quality assurance requirements, or the capacity of the existing Accreditation Centre should be strengthened.

Recommendations for priority actions

- Expand national regulations for laboratory certification and accreditation to all diagnostic laboratories in Georgia.

- Create national capacity for regular assessment of all clinical and veterinary laboratories in the country, in order to assess compliance with quality assurance requirements.

- Implement a continuous education programme on quality-assured diagnostics, for workers in medical and veterinary diagnostic laboratories.

- Expand implementation of the Quality Management System and ISO accreditation to include diagnostic laboratories from all sectors, in addition to the laboratory networks at NCDC and the Ministry of Agriculture.

- Improve diagnostic capacities at primary health care level.

DETECT

SURVEILLANCE

INTRODUCTION

The purpose of real-time surveillance is to advance the safety, security and resilience of the nation by leading an integrated surveillance effort that facilitates early warning and situational awareness of all IHR hazard-related events.

> ### Target
>
> *(1) Strengthened foundational indicator- and event-based surveillance that are able to detect events of significance for public health and health security; (2) improved communication and collaboration across sectors and between subnational (local and intermediate), national and international levels of authority regarding surveillance of events of public health significance; and (3) improved national and intermediate level regional capacity to analyse and link data from and between, strengthened, early-warning surveillance, including interoperable, interconnected electronic tools. This would include epidemiologic, clinical, laboratory, environmental testing, product safety and quality and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR and OIE guidelines.*

LEVEL OF CAPABILITIES

Georgia has demonstrated well-developed surveillance capacity in the public and animal health sectors. An Electronic Integrated Disease Surveillance System (EIDSS) is used for both sectors. Out of 129 listed diseases, 72 are subject to immediate notification, as approved by Ministerial Order 2-238. As an OIE member, Georgia is also obliged to report notifiable disease outbreaks to OIE through the WAHIS system (reports from Georgia are available in the World Animal Health Information Database (WAHID)).

There is one single national electronic system for surveillance of infectious diseases. EIDSS has 194 human and veterinary data entry sites across the country, and ensures the exchange of information in real-time between the health care and veterinary sectors. Disease surveillance for human and animal health are performed using the One Health approach, with EIDSS and a common electronic system. There is a list of agreed priority zoonotic diseases: brucellosis, anthrax, rabies, avian influenza, CCHF and poxvirus infections.

As a part of event-based surveillance, an early warning system for unusual respiratory events monitors unusual individual cases or clusters. For indicator-based surveillance, all notifiable infectious diseases have case definitions that are available to medical facilities around the country. The NCDC receives immediate and weekly reports from all health facilities in the country, including reports submitted through EIDSS. All public health centres in Georgia have the capacity to report through EIDSS.

Cross-border surveillance (for example, with Azerbaijan and Armenia) provides good examples of international collaboration on health data sharing within the BNSR and the structures of the Black Sea Economic Cooperation (BSEC).

Syndromic surveillance is established for influenza-like illness (ILI) and severe acute respiratory infections (SARI), using polymerase chain reaction (PCR) testing on influenza virus and its subtypes, as well as other respiratory viruses (e.g. RSV, adenovirus, rhinovirus, etc.). ILI has one sentinel site and SARI has five. Medical facilities have their own electronic tool to collect and report data (the Health Management Information System (HMIS)), but this is not connected to EIDSS. Medical facilities notify and report to primary health care facilities by phone and using paper forms.

Regarding data analysis capabilities, EIDSS develops standard reports and also has an analytical module that can be used to perform data analysis and develop diverse reports. These functions of EIDSS are used regularly by the NCDC. All Communicable Disease Department staff are trained to use EIDSS for data analysis and reporting, and do so. Some publications are prepared using data from the EIDSS system – for instance, epidemiological bulletins are developed and published annually at central level and reflect disease incidence by region, tendencies by year, exposure data, etc.

There are, however, important challenges to the sustainability and capacity for expansion of the EIDSS system that require high-level IT specialists to address, and challenges in interoperability with other systems used in the health sector, such as the Laboratory Information Management System (LIMS) and the HMIS. These challenges necessitate a good plan for transition from EIDSS technical support provided by external contractors managed by the United States Defence Threat Reduction Agency (DTRA) to a national system with funding and skilled human resources. Some analytical modules of EIDSS also require additional training, in particular at the intermediate level.

A further important challenge is the need to strengthen the capacity of the NFA and improve its cooperation with the health sector in order to prevent foodborne epidemics.

Georgia has capacity to conduct risk assessment at a central level, but additional risk assessment capacity is required at subnational and/or intermediate levels. This requires expansion of staff skills, competences and capacities through risk assessment training programmes performed at intermediate and local (PHC) levels, as well as expansion of capacity to address animal health issues.

Indicators and scores

D.2.1 Surveillance systems – Score 4

Strengths and best practices

- Event-based surveillance is in place at national, intermediate and local levels for some unusual respiratory and other events.
- An early-warning system for unusual respiratory events monitors individual cases or clusters. This system has been established as a pilot surveillance system in several regions where tourism is highly developed.
- Information from media and other public sources is analysed daily to detect health events that pose a serious risk to public health.
- In relevant international outbreaks, all public health levels are given information about the risk of possible importation of disease cases into the country, including case definitions or symptoms, and are required to notify to local PHCs or the NCDC.
- Emergency services notify NCDC of all cases with unusual symptoms or conditions.
- Indicator-based surveillance is part of the routine surveillance system at national, intermediate and local levels, allowing the possibility of detecting outbreaks, disease trends, seasonality, burdens and risk factors. PHCs and the NCDC receive immediate and weekly reports from all health facilities.
- All notifiable infectious diseases have case definitions that are available to medical facilities around the country. 72 diseases/conditions are subject to immediate notification through the surveillance system.
- A cross-border surveillance mechanism is in place, and urgent and monthly notification of neighbouring countries is performed as part of collaborations with Azerbaijan and Armenia within the BNSR. Establishment of the same collaboration with Turkey is being negotiated at the time of writing.

- Over the past 10 years, a sentinel surveillance system for several infectious diseases has been established and strengthened in Georgia for ILI/SARI, rotavirus and invasive meningitis. Georgia is on the WHO list of countries providing surveillance data on ILI/SARI, rotavirus, invasive meningitis, measles and acute flaccid paralysis (AFP). Data on ILI/SARI and HIV is entered into ECDC's and WHO's joint surveillance platform, TESSy.

Areas that need strengthening and challenges

- The performance of the surveillance system should be regularly monitored, evaluated and
- updated at all levels. This will require additional funds and human resources.
- There is a need to build the skills and qualifications of staff at the intermediate and local levels. Additional training programmes will also need supplementary funds and human resources.
- The public health education system faces some challenges.
- Georgia suffers from low salaries in public institutions, especially at the intermediate and local levels.

D.2.2 Use of electronic tools – Score 4

Strengths and best practices

- The surveillance system is equipped with EIDSS, which includes the human and animal health sectors, and allows the real time exchange of information between the two structures. Human cases can thereby be linked to animal cases.
- EIDSS can share data with other electronic tools used at regional or international levels. It allows observation of registered cases, samples collected and types of tests conducted, and provides final results of disease surveillance to system users in real-time.
- Routine reporting from PHCs to the NCDC is performed using EIDSS.
- NCDC specialists use EIDSS for data entry, reporting and analysis.
- Monthly reports on measles and rubella exported from EIDSS are easily submitted to the database of the WHO Europe Centralized Information System for Infectious Diseases (CISID).

Areas that need strengthening and challenges

- EIDSS is a complex system operated by a contractor organization. System operation requires highly trained IT specialists.
- Links are required between EIDSS and LIMS, and between private laboratory systems and EIDSS.
- Medical personnel at local level use their own electronic system, HMIS, which is not linked to EIDSS. Notification and reporting to PHCs is done on paper and by phone. Linking them will require funds and human resources, as different systems have different operators.
- PHC specialists are not able to perform data analysis.
- There is a need to strengthen the capacity of the NFA and improve its cooperation with the health sector in order to prevent foodborne epidemics.
- The EIDSS analytical module requires staff to have appropriate knowledge. Funds and human resources are needed for periodic training of staff at intermediate level.

D.2.3 Analysis of surveillance data – Score 4

Strengths and best practices

- EIDSS develops standard reports, and also has an analytical module that can be used to perform deeper analysis and develop diverse reports. NCDC specialists use these EIDSS functions often, sometimes daily.
- All NCDC Communicable Disease Department staff are trained to use EIDSS for data analysis, risk assessment and reporting. NCDC epidemiologists are responsible for analysing nationwide data, and epidemiological and laboratory data can be linked using EIDSS.

DETECT

- Risk assessment is conducted at national level. In cases of infectious hazards, NCDC and the MOH are responsible for disseminating information to the public and other stakeholders.

- An epidemiological bulletin is developed and published annually at central level.

- Weekly influenza reports are published during the season. Weekly measles reports are published during outbreaks.

Areas that need strengthening and challenges

- Risk assessments are conducted at a national level only.

- There is a lack of staff qualified to prepare analysis at intermediate level (in PHCs) and in the animal health sector.

- Funds and human resources are needed for periodic training of staff at intermediate level.

Recommendations for priority actions

- Establish regular monitoring and evaluation of both the human and animal health surveillance systems as a basis for ongoing development and improvement.

- Prepare a plan for integration and interoperability between HIMS, LIMS and EIDSS.

- Design a training programme for data analysis, and specifically risk assessment, for staff in the public and animal health sectors.

- Ensure the sustainability of EIDSS and other electronic tools by planning, staffing and funding maintenance, development and IT support.

DETECT

REPORTING

INTRODUCTION

Health threats at the human−animal−ecosystem interface have increased over the past decades, as pathogens continue to evolve and adapt to new hosts and environments, imposing a burden on human and animal health systems. Collaborative multidisciplinary reporting on the health of humans, animals and ecosystems reduces the risk of diseases at the interfaces between them. The IHR national focal points, the OIE delegate and WAHIS national focal point should have access to a toolkit of best practices, model procedures, reporting templates and training materials to facilitate rapid (within 24 hours) notification of events that may constitute a public health emergency of international concern (PHEIC) to WHO and listed diseases to OIE, and will be able to rapidly (within 24/48 hours) respond to communications from these organizations.

> ## Target
>
> *Timely and accurate disease reporting according to WHO requirements and consistent reporting to/information of FAO and OIE.*

LEVEL OF CAPABILITIES

The NCDC is Georgia's designated IHR NFP. It is the country's main public health agency and, along with the rest of the MOH, covers biological incidents. The MEPA covers chemical and radiation incidents. The NCDC collects information from all relevant institutions for notifying WHO. Food safety issues are reported through the IHR NFP in cases – including human cases – where there is a public health impact. The IHR NFP has undergone several trainings provided by WHO and other stakeholders.

The IHR (2005) is the main document used for reporting to WHO. Georgia has SOPs for reporting disease outbreaks into the OIE WAHIS system in order to meet official animal disease reporting obligations to OIE. Georgia also shares information with the FAO European Commission for the Control of Foot-and-Mouth Disease (EUFMD) regarding foot-and-mouth disease control measures and vaccination data.

Communication and information sharing between NCDC and the NFA is carried out according to Governmental Decree #336, 2015: "Approval of rules of providing functional integrated surveillance on infectious diseases". The NFA is responsible as OIE Delegate to report animal disease events according to OIE requirements (i.e. immediate notification and follow-ups, and six-monthly and annual reports).

Besides the requirement to notify OIE, veterinary services are also obliged to report to neighbouring countries in cases of transboundary animal diseases. There is also a statement of intention among countries in the trans-Caucasian region to achieve more advanced notification, including vaccination data. Under the BNSR initiative, Georgia and Azerbaijan also share more advanced information regarding several zoonotic diseases in their respective countries. The IHR NFP shares monthly aggregated data on infectious disease with Kazakhstan and Azerbaijan.

There is no established mechanism for receiving notification from other (non-health) sectors regarding non-biological events. A multisectoral tabletop exercise was implemented with support from DTRA in March 2019, led by three agencies: the NCDC, the NFA and the Emergency Management Service (EMS). The exercise scenario was based on avian influenza and required actions from both the human and animal health sectors. After each inject , the roles and responsibilities of each agency were discussed. Another recent exercise has been the Joint Assessment and Detection Event (JADE) exercise organized by WHO, which is based on an outbreak situation.

DETECT

Information on animal rabies samples and human/animal cases of rabies are notified to the WHO rabies bulletin.

Indicators and scores

D.3.1 System for efficient reporting to FAO, OIE and WHO – Score 3

Strengths and best practices

- The NCDC is the designated IHR NFP.
- A 24/7 duty officer system is established at the IHR NFP for communication with WHO.
- The NFA is the designated OIE focal point. In the 2009–2012 national action plans for IHR implementation, a special e-mail address and cell phone number were dedicated to communication with WHO and other stakeholders.
- The NFA is responsible for reporting to OIE, with regular six-monthly reports, annual reports and immediate notification of new cases of notifiable disease. After such a notification, there is follow-up reporting every 10 days until disease elimination.
- The IHR (2005) have been translated into Georgian.
- Georgia reports to EUFMD (FAO) with foot-and-mouth disease data on vaccination and control measures.
- Georgia provides quarterly reports to the WHO rabies bulletin.

Areas that need strengthening and challenges

- An established mechanism is needed for reporting non-health related events to the IHR NFP.
- Risk identification and assessment at the district level require improvement.
- There is a need to increase IHR awareness and the capacity among farmers and private veterinarians.
- There is a lack of reporting protocols and SOPs.

D.3.2 Reporting network and protocols in country – Score 4

Strengths and best practices

- Procedures are in place for reporting a potential PHEIC to the IHR NFP and to WHO.
- A mechanism exists for mandatory reporting between sectors, as defined by the Ordinance of the Government on Approving Rule of Functioning of Integrated National Surveillance System on Infectious Diseases.
- There is mandatory reporting of any unusual/unexpected event, or any event with the risk of international spread.
- There is mandatory reporting between sectors on zoonotic, foodborne and waterborne diseases.
- The veterinary service is obliged to report to neighbouring countries in cases of transboundary animal disease.
- Under the BNSR initiative Georgia, Armenia and Azerbaijan share information regarding several zoonotic diseases in their respective countries.
- The NFP/NCDC shares monthly aggregated data on infectious diseases with Kazakhstan.

Areas that need strengthening and challenges

- There is a need to strengthen collaboration between sectors to enhance the reporting system, improve awareness on IHR, and strengthen timely reporting.
- Georgia needs the capacity to receive information 24/7 from the non-health sectors.
- Early-warning systems are required.

DETECT

Recommendations for priority actions

- Enhance reporting using an all-hazards approach that covers food safety and non-biological threats such as chemical and radiation events.

- Promote and plan regular staff training and conduct simulation exercises to enhance awareness and reporting capabilities in all sectors.

- Raise awareness of IHR and reporting requirements in other (non-health) sectors.

- Create incentives and awareness among farmers, rural communities and veterinarians, to facilitate notification of suspected events with potential public health consequences, such as zoonotic diseases.

HUMAN RESOURCES

INTRODUCTION

Human resources are important in order to develop a sustainable public health system over time by developing and maintaining a highly qualified public health workforce with appropriate technical training, scientific skills and subject matter expertise. Human resources include nurses and midwives, physicians, public health and environmental specialists, social scientists, communications, occupational health, laboratory scientists/technicians, biostatisticians and IT specialists, as well as biomedical technicians and a corresponding workforce in the animal sector: veterinarians, animal health professionals, para-veterinarians, epidemiologists, IT specialists etc.

The recommended density of doctors, nurses and midwives per 1000 populations for operational routine services is 4.45 plus 30% surge capacity. The optimal target for surveillance is one trained (field) epidemiologist (or equivalent) per 200 000 population, who can systematically cooperate to meet relevant IHR and OIE Performance of Veterinary Services (PVS) core competencies. One trained epidemiologist is needed per rapid response team.

> ### Target
>
> *States Parties with skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR (2005).*

LEVEL OF CAPABILITIES

It was clear that IHR-related sectors other than health were not included in the development of the JEE self-evaluation, nor were they represented at the technical discussions. The need for a multisectoral, One Health approach is addressed in the priority actions for this section.

Georgia has a well-staffed public health sector in general, with 33 epidemiologists/public health specialists in the Communicable Disease department at the NCDC and 68 laboratory specialists at the Lugar Centre (BSL3) laboratory. The two zonal diagnostic laboratories at Adjara and Imereti are together staffed with six epidemiologists/public health specialists and 22 laboratory specialists; and the seven laboratory surveillance stations are staffed with 15 epidemiologists/public health specialists and 12 laboratory specialists. Georgia ranks 6th in the world for doctors per 1000 population,[3] a figure quoted at 734 per 100 000 during the JEE mission (including dentists). The number of nurses is almost two thirds that of doctors, at 482 per 100 000 population.

Staffing of the health system is market driven and not governed by a human resources plan. Within the health services, nurses are being standardized. A method for evaluating how many people there are in a region (and subsequently their staffing needs) has been approved by the MOH and a strategic plan to address nursing numbers was in development at the time of the JEE mission in June 2019. A development strategy for medical human resources was under development, although it was suggested that this be further developed under One Health principles to include environmental health cadres, food safety and the veterinary sector.

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3   World Bank data for 2014, https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?most_recent_value_desc=true, accessed 11 June 2019

DETECT

Continuing professional development (CPD) is mandatory for gynaecologists and neonatologists, but voluntary and out-of-pocket for other cadres. CPD courses for doctors are accredited by the Professional Development Council of the MOH. The veterinary profession is now regulated, although CPD for this cadre is not undertaken. A lot of training has been conducted outside the CPD programme, although there is no quality control for these courses, many of which are donor-supported and focussed towards staff at national level. The exception to this is a frontline field epidemiology training course aimed specifically at municipality staff. The field epidemiology training programme (FETP) frontline course is structured for regional public health specialists and addresses basic epidemiological principles. At the time of the JEE mission 18 people from three regions had graduated from this course. The programme was initially provided by the US CDC, but has been taken over by the NCDC, which will continue to implement it. Half of the funds for the course come from DTRA, with further contributions from NCDC. Mentors on the course are graduates from the advanced FETP course. DTRA sponsors many courses, including the British Medical Journal Clinical Decision Support Learning Programme, which provides unlimited modules in English and 445 modules translated into Georgian.

There is no career progression linked to training or professional development.

Development of human resources in the healthcare sector is a strategic priority under the national Health Priority Directions for 2014–2020. These aim to generate human resources relevant to Georgia's needs and to harmonize all three stages of medical education with international standards (in particular 2005/36/EC requirements set by the European Directives and Global Standards for the World Federation of Medical Education (WFME)), as well as to develop a mandatory system of continuous medical education. With an aging workforce and lack of incentives to work in more rural settings, it is imperative that this strategic priority is addressed without delay, in order to ensure quality coverage for public health services in non-urban settings in the years to come.

Indicators and scores

D.4.1 An up-to-date multisectoral workforce strategy is in place – Score 2

Strengths and best practices
- The education sector is strong and enjoys significant pedagogical resources.
- Professional education has a basis in legislation.
- There is significant donor support for professional education.
- Human resources for health are a strategic priority of the Government of the Republic of Georgia.

Areas that need strengthening and challenges
- There is no multisectoral workforce strategy in place.
- There are significant disparities between the large urban centres of the country and the more rural areas in staffing levels; staff qualifications and access to training, access to professional development, and salaries.
- There is no public health personnel planning, nor are there any regional distribution tools or incentives for addressing disparities in staffing levels.

D.4.2 Human resources are available to effectively implement IHR – Score 3

Strengths and best practices
- All geographical regions of the country are able to access medical services.
- There are coordination mechanisms between the different sectors implementing the IHR (2005).
- There is strong political will and external support for the public health sector.

Areas that need strengthening and challenges

- There is a need for joint training on roles and responsibilities under the IHR (2005).
- IHR (2005) sensitization and awareness should be included in professional education.

D.4.3. **In-service trainings are available – Score 3**

Strengths and best practices

- Professional and in-service training opportunities are available, especially online.
- In-service training programmes are available according to local needs.
- A training centre is available at the NCDC premises.

Areas that need strengthening and challenges

- There is a need to provide training in regional centres.
- Mentors need to be made available for professional development in regional areas.
- The curriculum for training courses should be evaluated.

D.4.4 **FETP or other applied epidemiology training programme in place – Score 4**

Strengths and best practices

- Frontline epidemiology training is available, as is a two-year field epidemiology and laboratory training programme (FELTP).
- There are opportunities for professional development provided by well-qualified teachers and trainers.

Areas that need strengthening and challenges

- There are limited opportunities and incentives for regional and district level staff to access professional development courses.
- The focus of continuing professional education is on doctors, but other One Health-associated cadres have fewer opportunities.

Recommendations for priority actions

- Prepare and implement a One Health public health personnel development strategy that includes mechanisms to address projected retirements of regional and district staff.
- Develop a mechanism to link continued medical education to career development.
- Develop criteria for reviewing and quality assurance of the curricula of relevant Bachelors' and Masters' degree courses, to ensure compliance with international standards.
- Integrate IHR (2005) and emergency management content into multisectoral training programmes, and create a continued professional education system in all IHR-related cadres.

DETECT

RESPOND

EMERGENCY PREPAREDNESS

INTRODUCTION

Emergency preparedness is defined as "the knowledge and capacities and organizational systems developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, emerging or current emergencies." A state of preparedness is the combination of planning, allocation of resources, training, exercising and organizing to build, sustain and improve operational capabilities at national, intermediate and local or primary response levels, based on strategic risk assessments. A strategic risk assessment identifies, analyses and evaluates the range of risks in a country and enables risks to be assigned a level of priority. Strategic risk assessments include analyses of potential hazards, exposures and vulnerabilities, identification and mapping of available resources, and analyses of capacities (routine and surge) at the national, intermediate and local or primary levels to manage the risks of outbreaks and other emergencies. Emergency preparedness applies to any hazard that may cause an emergency, including relevant biological, chemical, radiological and nuclear hazards, natural hazards, other technological hazards and societal hazards.

> **Target**
>
> *(1) Existence of national strategic multi-hazard emergency risk assessments, risk profiles, and resource mapping; (2) Existence of multi-hazard emergency response plans; (3) Evidence, from after action and other reviews, of effective and efficient multisectoral emergency response operations for outbreaks and other public health emergencies.*

LEVEL OF CAPABILITIES

Georgia has a strong legislative base for its emergency preparedness and response system, provided by the law on national security. The Emergency Management Agency of the Ministry of the Interior has a *National Civil Security Plan* with 17 functions, function six of which pertains to the provision of medical services. In addition to this plan, there is also an action plan, a hazard assessment, a national strategy, a reduction of threats plan and a risk communication plan. Most of the function (sectoral) plans are due for revision or have not yet been established.

The *National Civil Security Plan* outlines the roles and responsibilities of the lead and supporting agencies for each of the functions. At the time of the JEE, the plan was classified, and it has not been shared with the supporting agencies. A board of experts provides advice on risk management.

The Emergency Management Agency follows EU standards for vulnerability mapping, although the current maps were developed in 2009 and sectoral vulnerability mapping is encouraged. The software and hardware required to conduct this type of mapping are not available, and current maps are from 2009, which reduces their effectiveness for preparedness interventions. In 2019, the NCDC conducted a public health risk prioritization exercise to guide its management of priority public health risks.

The Emergency Management Agency has a defined list of population groups, with different approaches to engagement. These groups are: (1) leading persons (agencies, organizations and economic units); (2) volunteers working during emergencies; (3) service staff; (4) citizens not employed in the industrial or service fields; and (5) students and schoolchildren. Preparedness activities and training of volunteers takes place, and there are specific focused activities for these population groups. The unemployed and older people are considered especially hard to reach in terms of preparedness and risk communications.

All hospitals are required to have a hospital emergency response plan. Mapping of resources throughout the health care systems is conducted by the Emergency Coordination Centre, which is also responsible for providing ambulance and search and rescue services. There is currently work ongoing to assess all hospitals using the Hospital Safety Index, which looks at both structural and functional elements for emergency response.

The health sector has limited stockpiles of emergency commodities, but does have memoranda of understanding with pharmaceutical companies for the rapid provision of commodities for emergency use. There is a vaccine distribution plan, which was used during the recent measles outbreak and during the severe influenza season of 2018/9.

Indicators and scores

R.1.1 Strategic emergency risk assessments conducted and emergency resources identified and mapped – Score 2

Strengths and best practices
- Georgia follows EU legislative standards for civil protection.
- The Emergency Coordination Centre has an inventory of resources for use in coordinating triage and emergency services within the health sector. This includes specialist services, bed availability and blood banking.

Areas that need strengthening and challenges
- There are no agreed risk assessment criteria specific for Georgia.
- The software required to develop hazard and vulnerability maps is not available.

R.1.2 National multisectoral multi-hazard emergency preparedness measures, including emergency response plans, are developed, implemented and tested – Score 2

Strengths and best practices
- The Emergency Management Agency has an approved methodology for emergency response plans.
- A public health risk prioritization exercise has been conducted.

Areas that need strengthening and challenges
- Only some lead agencies have emergency response plans in line with their functions under the *National Civil Security Plan.*
- There is a shortage of staff in the responsible agencies to develop and implement emergency response plans.
- There is a shortage of staff at local level to work in emergency preparedness and response.

RESPOND

Recommendations for priority actions

- Develop the criteria and indicators for conducting national risk, vulnerability and capacity assessments, as well as accompanying 'function-specific' indicators.

- Encourage all functions to complete or update their function-specific emergency risk management plans in coordination with the Emergency Management Agency and each other, to ensure function-compatible emergency prevention and response operations.

- Disseminate function-specific plans widely among supporting agencies and the public.

- The units of the National Security System should carry out intensive training of appropriate persons in the field of civil security and emergency management.

RESPOND

EMERGENCY RESPONSE OPERATIONS

INTRODUCTION

A Public Health Emergency Operations Centre (PHEOC) is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. Emergency operations centres provide communication and information tools and services, and a management system during a response to an emergency or emergency exercise. They also provide other essential functions to support decision-making and implementation, coordination and collaboration.

> ### Target
>
> *Countries will have a coordination mechanism, incident management systems, exercise management programmes and Public Health Emergency Operations Centre (PHEOC) functioning according to minimum common standards; maintaining trained, functioning, multisectoral rapid response teams, and trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of an emergency.*

LEVEL OF CAPABILITIES

The Government of Georgia relies on the Emergency Management Agency of the Ministry of Internal Affairs to coordinate national emergencies. These are defined simply as any incident or event that has been declared a national emergency. In such an event, the national emergency situation room is activated, and the national response is coordinated from the situation room.

Activities during a national response include event damage control, rescue operations, activities to protect the population, and organizing humanitarian assistance at affected locations.

For health emergencies, the NCDC has established the Public Health Preparedness and Response Unit (PHPR). This unit is responsible for the NCDC preparedness to respond to public health emergencies. Part of the development of the PHPR Unit is the development of a PHEOC, which does not yet exist. The NCDC currently uses the Incident Management System (IMS) to organize response actions, even though it does not have a dedicated PHEOC space.

The PHPR coordinates all aspects of a public health response. This includes the work of laboratories; coordinating with the Emergency Management Agency for national level assets, should they be needed; and working with public health centres and hospitals to ensure response operations flow according to plan.

The *National Civil Security Plan* outlines a number of specific emergency response functions. Medical services are listed as Function 6. Function 6 names the MOH and the NCDC as the leads for the medical response function. The Emergency Management Agency will coordinate to meet the needs of Function 6 if the emergency is elevated to the level of a national emergency.

RESPOND

Indicators and scores

R.2.1 Emergency Response Coordination – Score 3

Strengths and best practices

- A legislative framework similar to the EU civil protection mechanism/standards has been created.
- The government has approved the methodology to develop emergency response plans.

Areas that need strengthening and challenges

- Within the security system, only some units have developed emergency response plans.
- The security system does not have identified sector risk-specific first responder groups.

R.2.2 Emergency Operations Centre Capacities, Procedures and Plans – Score 2

Strengths and best practices

- A National Situation Room is functioning within the National Security Council of Georgia and is subordinated to the Prime Minister. It is equipped with appropriate technological equipment, and allows strategic and operational management to be implemented.
- Command exercises are performed using the Situation Room, within the context of different programmes and interagency collaborations.

Areas that need strengthening and challenges

- The National Security Council is currently in the process of being formed.
- No emergency management committee has been developed across the ministries to maintain direct communication with the Situation Room in an emergency. This process has just begun.

R.2.3 Emergency Exercise Management Programme – Score 2

Strengths and best practices

- Trainings and teaching courses on emergency situation management are provided as a preparedness component of the *National Civil Security Plan.*
- Emergency situation trainings and teachings are held in health care institutions within the context of different programmes.

Areas that need strengthening and challenges

- Emergency situation trainings are mostly held by international and nongovernmental organizations.
- Increased internal resources for emergency response operations are required.
- Due to the fact that no emergency management plans have been developed in the ministries, exercises are not systematic.

Recommendations for priority actions

- Continue to develop sector risk-specific and multisectoral first responder groups.
- Continue to develop the NCDC Public Health Emergency Operations Centre (PHEOC), in accordance with WHO guidance on developing a PHEOC.
- Develop a public health emergency management programme that includes an exercise and after-action report/improvement plan component.
- The NCDC should adopt a plan development programme based on a documented risk assessment process.

LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

INTRODUCTION

Public health emergencies pose special challenges for law enforcement, whether the threat is manmade or naturally occurring. In a public health emergency, law enforcement will need to quickly coordinate its response with public health and medical officials.

> ### Target
>
> *Country conducts a rapid, multisectoral response for any event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide timely international assistance.*

LEVEL OF CAPABILITIES

Multisectoral collaboration during emergency responses in Georgia is performed under the National Public Security System ("the system"), established in accordance with the Civil Security Law, the *National Civil Security Plan,* and other legal sectoral and intersectoral provisions. The system is institutionalized by an executive agency – the Emergency Management Centre – and its regional and local units, state representatives, sectoral ministries and agencies, legal entities, sub-autonomous government bodies, and local authorities. The National Security Council, led by the Prime Minister or his authorized representatives, coordinates the emergency response at the national level. Small-scale,[4] non-national events are managed by parts of the system relevant to the threat, including the public health sector, together with relevant regional and local units and local emergency committees.

Legal provisions also determine and classify emergencies. Declaring an emergency triggers notification procedures and identification of the partner sectors relevant to managing that emergency.

The system formally provides for vertical and horizontal information exchange at every administrative level, although the JEE team was not presented with any relevant SOPs.

There is an approved technical scheme of sanitary and quarantine control and rule of implementation along the border and in Customs Control Zones. The ESCUA and the Ministry of the Interior Public Safety Management Centre have a memorandum regarding management of 112 notifications.

Different legal provisions regulate the work of health sector institutions[5] in emergencies, but the *National Civil Security Plan* remains the main reference, and imposes accountability and reporting requirements between agencies.

SOPs or agreements are missing for joint/shared risk assessment during events of public health and security significance. Also missing are any technical documents regulating joint responses at points of entry where both public health and security authorities have operational safety and health security responsibilities.

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4   A special management mechanism applies during martial law and in response to terrorist activities (*Law on Civil Security* Art. 17 and 18).

5   The MOH, the NCDC, the ESCUA and their regional and local units, healthcare service providers, etc.

Public health and security staff participate in multisectoral trainings and emergency response simulations organized at municipal, national and regional levels. All response agencies are included in the training process, which includes both table and field exercises. Part of the training is dedicated to information exchange (communication) issues.

Once procedures to engage sectors competent for non-biological hazards are in place, along with the technical documentation mentioned above, these good practices should upgrade the capacity score for this technical area to a 4.

Indicators and scores

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical or radiological event – Score 3

Strengths and best practices
- There is legal regulation of information exchange procedures for incidents, special events and emergency situations (including deliberate and/or incidental events).
- The multidisciplinary cooperation mechanism is defined in accordance with civil security law, the *National Civil Security Plan,* and other legal acts.
- Periodic multisectoral exercises, as well as field exercises at national, municipal and regional levels, are carried out following different scenarios. There were two such exercises in 2018.

Areas that need strengthening and challenges
- There is no unified programme for the joint training of health and law enforcement agencies.
- Trainings should be conducted for the health and security services on specific topics, such as joint investigations of events of unknown origin.
- There is a need to strengthen the joint capacity of public health and security services to respond to potential deliberate chemical, biological and/or radioactive events.
- A legislative basis should be created for events of deliberate, accidental and/or unknown origin (with a clear mechanism for establishing cooperation and responsibility between different institutes).
- Staff turnover can inhibit effective work in this area, as can a general lack of trained personnel and experts.

Recommendations for priority actions
- Review current legislation, including provisions on managing incidents of unknown, manmade and/or accidental origin.
- Regulate collaboration between sectors responsible for managing all IHR-related hazards, and develop, implement and exercise SOPs to strengthen the joint capacity of public health and security services to respond to chemical/biological/radioactive events.
- Create dedicated training programmes for public health and law enforcement agencies responsible for joint risk assessment and response. Conduct training for health and security services on specific topics, such as joint investigations of events of unknown origin and implementing public health countermeasures with respect to persons, baggage, cargo and goods.

MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

INTRODUCTION

Medical countermeasures are vital to national security and protect nations from potentially catastrophic infectious disease threats. Investments in medical countermeasures create opportunities to improve overall public health. In addition, it is important to have trained personnel who can be deployed in case of a public health emergency for response. Regional (international) collaboration will assist countries in overcoming the legal, logistic and regulatory challenges to deployment of public health and medical personnel from one country to another. Case management procedures should be available to all staff, and implemented across the system during health emergencies due to IHR-related hazards.

> ### Target
>
> *National framework for transferring (sending and receiving) medical countermeasures, and public health and medical personnel from international partners during public health emergencies and procedures for case management of events due to IHR related hazards.*

LEVEL OF CAPABILITIES

Georgia has limited capacity to produce antibiotics, no capacity to produce vaccines, and is not part of an international procurement programme.

According to the *National Civil Security Plan,* the MOH is in charge of the plan's Function 6 (medical care), and is responsible for contributing to other functions such as crisis management, coordination, transportation and humanitarian aid.

A confidential sector-specific plan (*Universal Healthcare and Quality Management for Protection of Patient Rights (State Concept 2014–2020)*) provides for public health functions under the requirements of the IHR (2005).

Health service providers should develop an emergency action plan for public health emergencies.

The state has no annual budget for medical reserves. Various institutions accumulate medical products and materials necessary for emergency response – for example, the Ministry of Resources has stockpiles; the MOH has reserves including some antivirals, level C personal protective equipment (PPE), masks, gloves and other medical consumables; and the NCDC maintains a stockpile of vaccines and laboratory consumables.

All medical facilities have stockpiles of medicines and consumables that should be sufficient for the first 72 hours of an emergency. According to memoranda of understanding between the MOH and pharmaceutical companies, manufacturers deliver their products during emergencies with no delays, for reimbursement afterwards; and in emergencies pharmacies dispense products for free if an appropriate doctor's prescription is provided. This mechanism proved efficient during the 2018/2019 flu season. Despite the lack of a written plan, Georgia has demonstrated functional processes for sending, receiving and distributing medical countermeasures.

The NCSP outlines a process for requesting humanitarian assistance from international organizations. The legislation provides for simplified procedures for receiving humanitarian assistance and registering medical products from abroad.

RESPOND

A sector-specific MOH response plan includes aspects of the distribution of medical products; however, it does not address special protective/security measures for accepting/sending medical products, or for sending health personnel during emergencies. Recognizing the importance of this issue, by the end of 2019 the MOH plans to adopt regulations regarding liability/insurance and the security aspects of host nation support.

Georgia has no staff dedicated to logistics or tracing aid measures. Other personnel in the sector fulfil these tasks when needed.

Georgia is developing its health workforce, and is planning to establish an EMT Coordination Cell within the Emergency Situations Coordination and Urgent Assistance Centre (ESCUA), with one fixed EMT for national response. 320 EMTs are currently active and 80 emergency disaster services will support the implementation of the plan. A new paramedic training programme has produced 60 paramedics since its start in 2017.

The case management of threats related to contagious diseases at all levels of the health system is regulated by the *Law on Public Health* and its subordinate acts. This legislation defines the state's duties during epidemics, and regulates the application of medical counter-measures.

Georgia has a *National Strategy for Chemical, Biological, Radiation and Nuclear (CBRN) Hazards.*

Case management guidelines and clinical protocols are published on the MOH's online portal, and case definitions for all notifiable diseases are distributed to health care providers.

Medical transportation services are under state control and are delivered by ESCUA, which plans to procure a CBRN intensive care mobile unit (ambulance type C) with specialized PPE.

The ESCUA training centre delivers courses in emergency care and plans CBRN-specific training in the future. The NCDC has conducted trainings for health care providers on specific topics including influenza, CCHF, Ebola and others.

Indicators and scores

R.4.1 System in place for activating and coordinating medical countermeasures during a public health emergency – Score 2

[Note: Georgia exceeds this score in reality and is working at a score 3 level. This lower score indicates the need for a comprehensive system for stockpiling and distributing medical countermeasures. Georgia may benefit from extending existing good practices around vaccine stockpiling to other medical countermeasures].

Strengths and best practices

- The *National Civil Security Plan* and other relevant legislature and regulations define procedures for requesting assistance from other countries and international organizations.

- A presidential decree regulates simplified procedures for accepting humanitarian aid.

- According to the normative order of the MOH on special conditions concerning special interests of the state (e.g. natural disasters, epidemics, outbreaks of rare diseases, etc.), pharmaceutical products that are not registered in Georgia can be rapidly approved for non-commercial use, bypassing normal procedures.

- Georgia has demonstrated good practices in receiving humanitarian aid during the war with Russia in August 2008 and the H1N1 pandemic in 2019. Georgia received and distributed antibiotics, disinfection and infusion solutions, medical supplies and consumables, ventilators and other medical equipment from Azerbaijan, Bulgaria, Czech Republic, Poland, Ukraine and others in 2018, and received 20 000 doses of Tamiflu from WHO in 2019.

- Georgia has demonstrated good practices in sending aid worth 92 433 584 Georgian Lari to the population affected by military aggression in the eastern regions of Ukraine in September 2014. Aid included medical products, vaccines, supplies, consumables and equipment.

Areas that need strengthening and challenges
- With the exception of the vaccine stockpile maintained by NCDC, there is no budget or organizational arrangement for national medical reserves/stockpiles.
- Georgia has no capacity to produce antibiotics, vaccines and/or laboratory materials.
- There is a need to introduce multisectoral exercises addressing issues of medical supplies (countermeasures) and distribution.
- There is a need to strengthen international cooperation and sign international agreements to send and receive medical countermeasures.

R.4.2 System in place for activating and coordinating health personnel during a public health emergency – Score 2

Strengths and best practices
- The NCSP outlines processes for requesting additional medical staff, as well as other types of humanitarian assistance.
- The formation of EMTs is underway, with plans to establish a fixed group of EMT-1 level teams accredited by WHO.
- Public health staff in Georgia benefit from participation in various international trainings and simulation events, including:
    - A seminar on EMT awareness-raising organized with WHO support in April 2019.
    - A regional earthquake simulator (INSARAG) – Armenia, December 2018.
    - DG ECHO training in civil defence and humanitarian operations – Bulgaria, 2018.
    - International field training – Montana, United States, 2018
    - A course on urgent medical care and disaster management for paramedics – Izmir, Turkey, 2018.
    - An exercise on international medical operations – Saaremaa, Estonia, April 2019.

Areas that need strengthening and challenges
- A legal framework should be established for deploying personnel and creating and maintaining a database of health care professionals and volunteers.
- A plan is required for establishing EMTs at the national level.
- To address the lack of qualified, trained staff and volunteers with international experience, there is a need to conduct training and simulation exercises on sending and receiving health care personnel
- International cooperation in staff activation/mobilization and coordination should be strengthened.
- Work in this sector is hampered by an insufficiency of financial resources.

R.4.3 Case management procedures implemented for IHR relevant hazards – Score 2
[Note: Georgia could not produce evidence of management of cases from non-health sectors (chemical and radiological safety)].

Strengths and best practices
- Georgia has an approved list of mandatorily notifiable diseases.
- Exchange of information is regulated by normative acts.
- Exchange of information between agencies – for example, around the management of outbreaks caused by food products – is carried out jointly by the health care, food and veterinary sectors.

RESPOND

- Georgia has a sufficient number of qualified specialists to manage incidents at all territorial/administrative levels.
- Specialist public health preparedness and response trainings and exercises are continually implemented.
- Legislation and disease-specific plans are in place to manage a range of specific issues, including epidemics of CCHF, cases of Ebola virus disease, detection of especially dangerous pathogens, and influenza outbreaks.

Areas that need strengthening and challenges

- There is a need for continuous monitoring of response systems and resources around IHR-relevant risks, and for strengthening of basic capacities.
- There is a need for regular training of staff, in particular through functional exercises related to specific risk management issues.
- Existing electronic databases related to IHR threats should be strengthened, creating intersectoral databases, within which integration of other databases for health care, food and veterinary services is possible.
- Work in this sector is hampered by an insufficiency of financial resources.
- Staff changes and turnover, and a lack of trained staff, also inhibit effective work.

Recommendations for priority actions

- Develop and institute a regulatory framework and mechanism for developing emergency medical teams (EMTs) at national level. Establish a database of trained personnel and volunteers.
- Establish a process for exchanging information and best practices concerning EMTs with WHO and other international partners, and include infectious disease and chemical/biological/radiological/nuclear (CBRN) responses.
- Improve guidelines to include budgeting and logistics for stockpiling medical countermeasures in accordance with Georgia's identified needs.
- Develop the treatment capacity of hospitals and clinics, including strengthening the capacity of staff to identify and treat patients afflicted by IHR-related hazards.

RESPOND

RISK COMMUNICATION

INTRODUCTION

Risk communications should be a multi-level and multi-faceted process that aims at helping stakeholders define risks, identify hazards, assess vulnerabilities and promote community resilience, thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is the dissemination of information to the public about health risks and events, such as disease outbreaks. For any communication about risk caused by a specific event to be effective, the social, religious, cultural, political and economic aspects associated with the event should be taken into account, including the voice of the affected population.

> ### Target
>
> *State Parties use multi-level and multi-faceted risk communication capacity. Real-time exchange of information, advice and opinions between experts and officials or people who face a threat or hazard (health or economic or social well-being) to their survival, so that informed decisions can be made to mitigate the effects of the threat or hazard and protective and preventive action can be taken. This includes a mix of communication and engagement strategies, such as media and social media communications, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.*

LEVEL OF CAPABILITIES

Since this section was prepared by the Emergency Management Agency, the Georgian team presenting was focused on national emergencies rather than minor health risks and crises such as outbreaks and epidemics. Function 2 of the *National Civil Security Plan* establishes a legal foundation for emergency risk communication in Georgia and provides a basis for activities to ensure network connectivity, establish and run warning systems, coordinate implementation, establish preparedness for electronic communications, mail and broadcasting, and protect IT resources, recovery and sustainable functionality.

The NCDC has a separate communications unit and a communication strategy (for example, on issues such as influenza and vaccination). A WHO workshop on risk communication has been carried out. Risk communication plans include strategies to access hard-to-reach populations such as certain ethnic minorities, elderly housewives, etc.

Communication should be carried out in language(s) understandable to all, with transparency around sources of information. The Ministry of Internal Affairs can communicate through state-owned broadcasting, or by means of private broadcasting companies with which they have written agreements to ensure timely information is disseminated to the population during emergencies. Electronic communications network companies shall ensure functionality of communication networks and reserve joint electronic communication networks for use in emergency situations.

There is no overarching risk communications plan for Georgia, even though there has been a legal basis for developing such a plan since 2010. Reasons for this might be financial, or to do with a lack of support from other ministries.

According to the national security law, emergency notice/warnings and other information shall include the following:

- Data on expected and emergent emergencies and scope of their spread.
- Data on the scope of the different organizations' activities.
- Information on the impact of the emergencies and their effects on the environment.
- Data on the consequences of emergency situations.
- Rules of conduct/behaviour in emergency situations.
- Information on the measures taken to protect citizens of Georgia and other persons on the territory of Georgia.

A civil security and defence teaching programme has been introduced. The trainers on this programme have been trained to conduct further activities for teachers. Guidebooks have been created for emergencies, security and management, and are being used by educational institutions.

Information is systematically disseminated through mass media and on social networks.

Indicators and scores

R.5.1 Risk communication systems for unusual/unexpected events and emergencies – Score 1
NB There is no system currently in place, but plans to establish them are in progress.

Strengths and best practices
- Georgia has a legislative framework for informing and notifying the public during emergencies.
- An early warning system is established at specific high-risk units.

Areas that need strengthening and challenges
- All units of civil security need to have mechanisms for informing and notifying the public.
- There is no law or by-law in the country that could define a common early warning system for informing the public (though existing law has included plans to develop such an act since 2010).

R.5.2 Internal and partner coordination for emergency risk communication – Score 3
[Note: There is substantial evidence of the existence of good communication practices, but less evidence of the coordination function between partners and stakeholders].

Strengths and best practices
- Internal collaboration on risk communication between agencies is continuous.

Areas that need strengthening and challenges
- It is necessary to establish reliable, sustainable special communications channels – for example, between the subjects of the national security system and their internal structures.
- There are no risk communication management plans that meet modern standards, and no legislation in this area.

R.5.3 Public communication for emergencies – Score 3

Strengths and best practices
- Training and exercises are systematically implemented in educational institutions.
- Mass media and social networks are covered by special stories and educational materials for informing the population.
- Open lectures are conducted and attendees at summer youth camps are introduced to the topic of civil safety. Demonstration exercises are conducted.

RESPOND

Areas that need strengthening and challenges

- Some organizations and units are not involved in public communication/awareness activities.
- The *Sendai Framework for Disaster Risk Reduction 2015–2030* recommendations on population awareness are not fully implemented in Georgia.

R.5.4 Communication engagement with affected communities – Score 2

Strengths and best practices

- In large-scale outbreaks/epidemics, the health promotion team at NCDC is involved in communication with the public.
- Local municipalities support efforts for health promotion, communication and social mobilization.

Areas that need strengthening and challenges

- There is a need to strengthen social mobilization and social media functions to reach out to affected communities.

R.5.5 Addressing perceptions, risky behaviours and misinformation – Score 1

Areas that need strengthening and challenges

- There is a need to establish a function for communication designed to address perceptions, risky behaviour and misinformation.

Recommendations for priority actions

- Implement byelaws to ensure effective risk communication and the introduction of early warning systems throughout Georgia.
- Complete all levels of the national emergency management plan.
- Create a national action plan for risk communication and implement a related awareness-raising strategy.
- Implement standard practices for establishing systematic public communication mechanisms for use during emergencies.
- Create a system for collecting data and analysing problems to facilitate responses to dangerous behaviour and misinformation, and to fight against panic.

RESPOND

IHR-RELATED HAZARDS AND POINTS OF ENTRY

POINTS OF ENTRY

INTRODUCTION

All core capacities and potential hazards apply to points of entry (POE) and thus enable the effective application of health measures to prevent international spread of diseases. States Parties are required to maintain core capacities at designated international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings), which will implement specific public health measures required to manage a variety of public health risks.

> **Target**
>
> *States Parties designate and maintain core capacities at international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings) that implement specific public health measures required to manage a variety of public health risks.*

LEVEL OF CAPABILITIES

Georgia has two ports (Batumi Sea Port and Poti and Kulevi Sea Port) and one airport (Tbilisi International Airport) designated as POE under the IHR (2005). Since 2010, the sanitary border control function has been the responsibility of the Georgia Revenue Service (Ministry of Finance), according to Government Decree N428 (Technological Scheme of Implementation of Sanitary and Quarantine Control at Georgia's Border Line and Customs Control Zones and Rule of Implementation of Sanitary-Quarantine Control).

Both designated ports are authorized by WHO to issue Ship Sanitation Control Certificates (SSCC), Ship Sanitation Control Exception Certificates (SSCEC), and extensions of these certificates. This is carried out by six trained inspectors. In both ports and airports, basic medical services are provided by the Revenue Service equipped with first aid kits and capable of issuing vaccination certificates for diseases regulated by WHO.

As the national coordinator of activities related to the IHR (2005), and in accordance with WHO recommendations, the NCDC provides information on emergency situations to the Revenue Service about affected countries, sanitary measures, and expected risks. Georgia's designated POEs have the capacities to apply recommended health measures related to travellers, as was shown with the operational response plan for Ebola virus disease, which ensured the Revenue Service was prepared to deal with travellers from Ebola-affected areas. These capacities are not, however, documented in memoranda of understanding or SOPs, and it is not possible to apply them to other infectious diseases.

Port/airport administration is run by private companies. These companies are responsible for continuing programmes to ensure safe environments at POEs for travellers (e.g. by providing public bathrooms, potable water supplies, eating establishments, etc.) and for controlling vectors and reservoirs in and near POEs.

The National Response Plan outlines the responsibilities of relevant structures, but there is no public health emergency contingency plan for responding to public health emergencies at POEs. Such a plan is needed, and must be integrated into the individual emergency plan of each port/airport to ensure that agreed SOPs are in place and all stakeholders are aware of one another's roles and responsibilities.

POEs also have Revenue Service veterinary inspection services in place. These are responsible for dealing with live animals, food of animal or non-animal origin, and phytosanitary control.

Indicators and scores

PoE.1 Routine capacities established at points of entry – Score 2

Strengths and best practices
- Medical services are established at all designated POEs and are equipped with first aid kits. These services can also administrate vaccines of international concern, and issue vaccination certificates.
- Both designated ports are authorized by WHO to issue SSCC/SSCEC/extensions.
- Georgia has trained personnel available at designated POEs for the inspection of conveyances.
- The Revenue Service also covers the veterinary service, and has related SOPs in place.

Areas that need strengthening and challenges
- Specific programmes for controlling vectors and reservoirs in and near POEs are the responsibility of the private sector in both the ports and the airport.
- POEs do not carry out inspection programmes to ensure safe environments at ports/airports for passengers.
- There is no isolation ward designated to take care of sick travellers.

PoE.2 Effective public health response at points of entry – Score 1
[Note: The country exceeds this score in its capacity to apply the activities of the POEs in emergency situations, but formalized action plans are necessary in order to unify and coordinate these actions. These must be written and agreed by all stakeholders].

Strengths and best practices
- Georgia has a common national emergency response plan in which the responsibilities of different stakeholders are outlined.
- Designated POEs have the capacity to apply recommended health measures related to travellers from affected areas in emergency situations (e.g. the Ebola outbreak in 2014–16).

Areas that need strengthening and challenges
- There are no memoranda of understanding or SOPs at POEs for action in emergency situations, or for joint action with other stakeholders (e.g. public health emergency services, private companies running ports/airports, security forces, etc.).
- Public health emergency response plans at points of entry are not integrated with generic emergency plans in each POE.

OTHER

Recommendations for priority actions

- Create a multisectoral public health emergency contingency plan for all relevant sectors and services at points of entry (POEs). This should define the roles and responsibilities of all stakeholders and contain SOPs for actions such as regular exchange of information between POEs, health authorities and facilities, and safe referral and transport of sick travellers.

- Implement vector control programmes and appropriate sanitary measures at POEs, involving the relevant private provider companies and supervising their work.

- Create SOPs for periodic training and simulation exercises to improve staff capacity and multisectoral communication.

OTHER

CHEMICAL EVENTS

INTRODUCTION

Timely detection and effective response of potential chemical risks and/or events requires collaboration with other sectors responsible for chemical safety, industries, transportation and safe disposal. This would entail that States Parties need to have surveillance and response capacity to manage chemical risk or events and effective communication and collaboration among the sectors responsible for chemical safety.

Target

States Parties with surveillance and response capacity for chemical risks or events. This requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal, animal health and the environment.

LEVEL OF CAPABILITIES

Georgia has shown good capacity to respond to chemical events (e.g. around use of PPE, chemical detection equipment, mass casualty decontamination, etc.). This is based on many years of combined experience and widespread attendance at national and international training courses on chemical response.

The Emergency Management Service (EMS) shows a good understanding of the public health response to chemical incidents, though this is lacking somewhat at hospitals or clinics. An established response plan specific to chemical events, is not available. An overall CBRN plan is currently in place, but this does not contain a list of priority chemicals or a list/map of hazardous chemical sites or facilities.

A dedicated CBRN medical support team would be beneficial, to work in collaboration with the CBRN response team based in EMS. Formation of such a team would include a training requirement on the medical management of chemical casualties.

One major identified gap was the lack of available guidelines and manuals on surveillance, assessment and management of chemical events. These need to be agreed and implemented, to support the establishment of processes for these areas. Georgia also has very little in terms of established legislation, national policies or plans to support these activities. Once plans, guidance and policies are in place (including the finalization and implementation of SOPs), the capacity for surveillance of chemical events could be strengthened through coordination between the various agencies whose remit involves chemicals. This would support the timely and systematic exchange of information.

Limited laboratory capacity is available for the analysis of chemicals, and there is limited scope for chemical analysis. Existing capacity is spread across numerous agencies. Increasing chemical laboratory analysis capacity requires additional human and financial resources. While a toxicology centre does exist, it needs additional training of staff and further resources (such as guidelines on the medical management of poisoned individuals). Georgia has expressed the desire to work towards the establishment of a Poisons Information Centre, and this is to be commended: increased collaboration with this centre would strengthen capacity for managing chemical events.

Between the various departments that share the remit for managing chemical events, Georgia possesses sufficient expertise and ability to score higher than it has done on this assessment. To fulfil the JEE requirements to increase these scores, a greater degree of intersectoral coordination and communication is required. For example, Georgia would benefit from increased coordination to develop

OTHER

the EIDSS (currently only used for human and animal infectious diseases) so that it could search for syndromes based on presented symptoms of exposure to a wider range of IHR hazards, including chemicals. This would provide a comprehensive, robust, all-hazard surveillance system, but would require changes to the current legislation, which could be a challenge.

Indicators and scores

CE.1 Mechanisms established and functioning for detecting[6] and responding to chemical events or emergencies – Score 2

[Note: Taken in isolation, Georgia's capacity to respond to public health chemical incidents is very good, and currently operates at level 4].

Strengths and best practices

- Georgia has modern equipment for responding to CBRN Incidents, and a very good response capacity for chemical events. This includes modern technical means of identification and detection and specialist equipment for mass decontamination.
- Georgia has many years of response experience, and has participated in a wide range of trainings and forums for sharing international experiences.
- Georgia has responded to numerous serious chemical incidents, for example:
  - On Kakheti Highway, in Tbilisi, liquid chlorine leaked from a 900kg reservoir, resulting in 78 intoxications and one death.
  - Responses to chemical incidents at border crossing points involving trucks loaded with substantial amounts of chemical substances.
  - A response to a road accident during the transportation of liquid oxygen on the Rikoti Pass, where an explosion was avoided as a result of the response.
  - A response to discovery of chlorine cylinders buried in the ground and leaching chlorine gas, thereby exposing the public to toxic chlorine. The cylinders were removed with minimal casualties.

Areas that need strengthening and challenges

- Guidelines should be established on surveillance, assessment and management of chemical events. Once this is done, a chemical event surveillance system should be implemented.
- Laboratory capacity is in place for chemical analysis (chemical warfare agents and toxic industrial chemicals).
- There is a need to increase human resources for first responses to CBRN, for example by creating a medical support team for the CBRN Responders Unit.
- There are some flaws in the legislation that supports chemical safety—for example, there is no registry of chemical substances and the *Law of Georgia on Prevention of Large-scale Accidents due to Hazardous Chemicals* has not been approved.
- There is no temporary storage capacity for chemical substances.

CE.2 Enabling environment in place for management of chemical events – Score 2

Strengths and best practices

- There is a good understanding of the management of the life cycles of certain chemicals, including those imported into the country. The MEPA has a leading role in tracking and storing chemicals (namely pesticides).

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6   Detection capacity includes not only surveillance, but also the laboratory capacity required for the verification of any events.

- The EIDSS surveillance system has the potential to perform syndromic surveillance, meaning that surveillance of chemical events could be conducted by the NCDC using this system. There is the potential to expand this to cover all IHR-related hazards and provide a comprehensive surveillance and response system.

Areas that need strengthening and challenges

- There is little established legislation on the management of chemicals in Georgia, or on surveillance, alerting and response for chemical events.

- There is a need to strengthen coordination and communication between agencies, to define, clarify and enforce the roles and responsibilities of those involved.

- A dedicated chemical event response plan should be established, to include a priority list of chemicals and mapping of hazardous chemical sites.

- Development of legislation for the management of chemical events is a major challenge in Georgia.

- Agencies with an interest in chemical event management are not aligned/coordinated.

- Georgia has limited toxicology expertise in management of individuals affected by toxic chemicals.

Recommendations for priority actions

- Establish a specific response plan for chemical events in line with the IHR (2005), to include: mapping of hazardous chemical sites; a list of priority chemicals; and the responsibilities of all relevant agencies.

- Develop a training and exercise programme for medical teams to back up first responders and capture and share lessons with the international CBRN community.

- Implement relevant legislation on chemical event surveillance, alerts and response.

- Strengthen laboratory capability to test for CBRN substances and toxic industrial chemicals.

- Work towards establishing a poisons information centre (for example, through training toxicology specialists and providing access to a toxicology information database).

OTHER

RADIATION EMERGENCIES

INTRODUCTION

To counter radiological and nuclear emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies are required in collaboration with sectors responsible for radiation emergency management.

> ### Target
> *States Parties should have surveillance and response capacity for radiological emergencies and nuclear accidents. This requires effective coordination among all sectors involved in radiation emergencies preparedness and response.*

LEVEL OF CAPABILITIES

The government of Georgia has an Agency for Nuclear and Radiation Safety (ANRS), which is responsible for legislation, regulation, information and coordination of nuclear and radiation safety in Georgia. The ANRS works closely with the Emergency Management Agency in the Ministry of Internal Affairs to coordinate national responses to nuclear or radiation emergencies.

Partners of the ANRS include the Ministry of Internal Affairs, State Security Service, MEPA, Ministry of Finance, MOH, Ministry of Foreign Affairs, Ministry of Defence and the NCDC.

Georgia possesses the basic technical capacities for preventing, detecting and responding to nuclear or radiological emergencies.

While basic capacities are in place, there are some severe gaps in capacity, including a lack of laboratory capacity for basic diagnostic testing for radionuclides, a local lack of laboratory capacity for environmental sample testing, and a shortage of financial and human resources.

Indicators and scores

RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies – Score 3

Strengths and best practices
- Georgia carries out regular drills and trainings.
- There is regular communication and coordination with international partners, including international organizations and authorities of foreign states.
- Georgia has been nominated as one of the countries providing thorough, relevant information to international databases related to nuclear or radiological emergencies.

Areas that need strengthening and challenges
- There is a need to build technical capacity in this area.
- There is a need to strengthen human resources in this area, including by training personnel in a proper way.

OTHER

RE.2 Enabling environment in place for management of radiation emergencies – Score 3

Strengths and best practices

- Georgia is about to adopt a national preparedness and response plan applicable to nuclear or radiological emergencies that is in compliance with updated international standard requirements (IAEA GSR Part 7). This plan will include advanced standards for communication with the public.

- The national preparedness and response plan (in draft) has been reviewed by several international experts, including within the framework of an International Atomic Energy Agency (IAEA) Integrated Regulatory Review Service (IRRS) Mission.

Areas that need strengthening and challenges

- Multisectoral/interdisciplinary coordination mechanisms for radiation emergency preparedness and response management should be strengthened—not all aspects are fully covered.

Recommendations for priority actions

- Work with national surveillance partners to develop a case definition for radiation poisoning.

- Develop a training/exercise programme based on the draft response plan.

- Develop a database of hospitals and clinics that are capable of receiving and treating radiation patients.

OTHER

APPENDIX 1: JEE BACKGROUND

Mission place and dates

Tbilisi, Georgia; 10–14 June 2019

Mission team members:

- Team lead: Frode Forland, Norwegian Institute of Public Health
- Team co-lead: Adrienne Rashford, WHO Regional Office for Europe
- Olov Aspevall, Public Health Agency of Sweden
- James Banaski, US Centers for Disease Control and Prevention (US CDC)
- Nikša Barišić, World Organisation for Animal Health (OIE)
- Tom Gaulton, Public Health England, the United Kingdom of Great Britain and Northern Ireland
- Roland Grunow, Robert Koch Institute, Germany
- Ana Guerra Neira, Ministry of Health, Spain
- Mark Nunn, independent technical writer and editor, London, the United Kingdom
- Julio Pinto, Food and Agriculture Organization of the United Nations (FAO)
- Boguslaw Suski, European Centre for Disease Prevention and Control (ECDC)

Observer

- Ulrike Grote, Robert Koch Institute, Germany

Objective

To assess Georgia's capacities and capabilities relevant to the 19 technical areas of the JEE tool for providing baseline data to support Georgia's efforts to reform and improve its public health security.

The JEE process

The JEE process is a peer-to-peer review. The entire external evaluation, including discussions around the priority actions, the strengths, the areas that need strengthening, best practices, challenges and the scores are collaborative, with JEE team members and host country experts seeking full agreement on all aspects of the final report findings and recommendations.

Should there be significant and irreconcilable disagreement between the external team members and the host country experts, or among the external experts, or among the host country experts, the JEE team lead will decide the outcome; this will be noted in the final report along with the justification for each party's position.

Limitations and assumptions

- The evaluation was limited to one week, which limited the amount and depth of information that could be managed.

- It is assumed that the results of this evaluation will be publicly available.

- The evaluation is not an audit. Information provided by Georgia will not be independently verified but was discussed and the evaluation rating mutually agreed to by Georgia and the evaluation team. This is a peer-to-peer review.

Georgia participants and institutions

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- Davit Torua, Emergency Situation, Coordination and Urgent Assistance Center

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- Nino Chikashua, Revenue Service
- Levan Gelashvili, Ministry of Internal Affairs, Emergency Management Service
- Tengiz Martiashvili, Revenue Service

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- Georgia Government Resolution # 428.

- Georgia Government Resolution on approval of the National Security Plan #508.

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- Authorities responsible for chemical event surveillance. http://moe.gov.ge.
- National Security Plan. https://matsne.gov.ge/ka/document/download/2993918/0/ge.pdf.

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- National Strategy on Reducing Chemical, Biological, Radiological and Nuclear (CBRN) Threats.
- Law of Georgia on Nuclear and Radiation Safety.
- Law of Georgia on Civil Security.
- National Plan of Georgia on Civil Security.
- Draft EPR Plan for nuclear or radiological emergencies.
- IRRS Mission Report.

JOINT EXTERNAL EVALUATION
OF IHR CORE CAPACITIES
of

GEORGIA

Mission report:
10-14 June, 2019