JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

ISLAMIC REPUBLIC OF MAURITANIA

Mission report:
27–31 March 2017

World Health Organization

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Contents

Executive Summary

Findings from the joint external evaluation

This report presents the shared conclusions of these discussions in the 19 IHR technical areas described in the JEE tool. The JEE team would like to underscore the dedicated and thorough work carried out by the experts and host country representatives during the self-evaluation exercise. The presentations given during the evaluation visit drew on legislative and technical documents, and were clear and succinct in marking the key points of the Mauritanian health system. This greatly facilitated collective work on the 19 technical areas, as well as the drafting of the final report. The team would particularly like to thank the Mauritanian experts for their active and assiduous involvement in the JEE process, and their compliance with the requirements of transparency and mutual accountability, which resulted in a rich review, particularly from the multisectoral standpoint. In the view of the participants, the process resulted in strengthened intersectoral collaboration, which is in itself a very significant result.

Main Strengths

Mauritania has legal instruments and regulations to enable compliance with the provisions of IHR (2005), including several core instruments for surveillance and response. The national IHR focal point is supported by skilled focal points from various sectors, a network that could be further enhanced by guidelines and procedures defining clear collaborative arrangements.

The regulatory and technical tools needed to detect and respond to zoonotic diseases are in place, as are structures of coordination, although these are active only in crises. Areas in need of strengthening include: the Mauritanian Animal Disease Surveillance Network (REMEMA); the Integrated Disease Surveillance and Response (IDSR) network; the electronic reporting system, which should be expanded; analysis capacities; and information exchange during non-crisis periods. Reporting methods could be improved through operating procedures that specify intersectoral coordination mechanisms and the approval of declarations to WHO and OIE.

The national laboratory system encompasses public health, veterinary services, fisheries and university research facilities. Required diagnostic capacities are in place, but better organization is needed. Laboratories should take part in quality assessment programmes, and standard guidelines and a national network of laboratories should be developed. Capacity is in place in the areas of biosecurity and biosafety, including for training, but there is a regrettable lack of legislation and regulations and their application in laboratories, and investments are needed for training and infrastructure.

The national Expanded Programme on Immunization (EPI) is effective and immunization coverage is strong, in particular for measles. The Programme could achieve even better results with improved awareness strategies and campaigns, in particular in isolated areas.

Human resources for human and animal health are available across all levels of the health pyramid, despite the issue of uneven geographic distribution. There is a workforce shortage in some specialty areas and sectors, including animal health. A human resources development and strengthening plan is needed and should include the mapping of IHR-related hazards and requirements and the promotion of ongoing training.

The National Centre for Public Health Emergency Operations (CNOUSP) is being set up and will collaborate with the Centre for Crisis Monitoring, Alerts and Management (COVACC), which has extensive human and technical resources to coordinate all sectors and provide surge capacity in all types of crisis. The partnership arrangements between the two centres need to be worked out in more detail and tested.

Major challenges

One of the major challenges that Mauritania faces is the lack of documentation and written procedures for a large number of activities. The most recent outbreaks, in particular those associated with zoonotic diseases, demonstrated the country's detection and response capacities, including intersectoral coordination. However, timeliness and effectiveness could be greatly improved through upstream procedures that clarify roles and responsibilities and indicate the action that needs to be taken, which should be tested through simulation exercises.

Concerning IHR-relevant hazards, the food safety surveillance and response mechanism is weak and coordination is lacking between the structures involved, despite the standards and legislative and regulatory instruments in place. A plan to respond to food-safety events is needed, including procedures and a coordination mechanism for relevant stakeholders. The same observations apply to response to chemical events and, to a lesser extent, radiation events.

Mauritania has essentially no capacity to address antimicrobial resistance. A technical group should be established to develop a national plan for the surveillance of antimicrobial-resistant pathogens, and to designate national reference laboratories among those that already have appropriate technical capacities. Communication activities are also needed in this area.

Mauritania has a National Disaster Risk Management Plan, but its public health component is not adequately developed. A national multi-hazard public health emergency preparedness and response plan should be developed, based around CNOUSP. The existence of multisectoral rapid response teams is a key asset that should be strengthened, and simulation exercises should be carried out to test their effectiveness. Mauritania should better assess its capacities to send and receive medical countermeasures and deploy personnel, and would benefit from partnerships with other states and international partners.

Next steps

Following this joint evaluation, the activities briefly sketched out in this report will be expounded upon through the drafting of Mauritania's national plan, which will take into account the findings of the JEE. From this point forward, and in a comprehensive manner, the importance of developing emergency plans and associated procedures for those areas where they are lacking must be stressed. Intersectoral collaboration is adequate in general, but needs to be better organized. Health emergency simulation exercises for many of the technical areas would allow stakeholders to more easily pinpoint the particular operational arrangements that need strengthening.

Mauritania Scores

Technical areas	Indicators	Score
National legislation, policy and financing	P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005)	2
	P.1.2 The State can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with IHR (2005)	2
IHR coordination, communication and advocacy	P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	2
Antimicrobial resistance	P.3.1 Antimicrobial resistance detection	1
	P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	1
	P.3.3 Health care-associated infection (HCAI) prevention and control programmes	1
	P.3.4 Antimicrobial stewardship activities	1
Zoonotic diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	3
	P.4.2 Veterinary or animal health workforce	3
	P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	3
Food safety	P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	1
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	1
	P.6.2 Biosafety and biosecurity training and practices	2
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	3
	P.7.2 National vaccine access and delivery	3
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	4
	D.1.2 Specimen referral and transport system	2
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	2
	D.1.4 Laboratory quality system	1
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	4
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	2
	D.2.3 Analysis of surveillance data	3
	D.2.4 Syndromic surveillance systems	3
Reporting	D.3.1 System for efficient reporting to FAO, OIE and WHO	3
	D.3.2 Reporting network and protocols in country	2
Workforce development	D.4.1 Human resources available to implement IHR core capacity requirements	2
	D.4.2 FETP[1] or other applied epidemiology training programme in place	3
	D.4.3 Workforce strategy	3

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[1] FETP: field epidemiology training programme

Preparedness	R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented	**1**
	R.1.2 Priority public health risks and resources are mapped and utilized	**1**
Emergency response operations	R.2.1 Capacity to activate emergency operations	**1**
	R.2.2 EOC operating procedures and plans	**1**
	R.2.3 Emergency operations programme	**3**
	R.2.4 Case management procedures implemented for IHR relevant hazards.	**2**
Linking public health and security authorities	R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	**2**
Medical countermeasures and personnel deployment	R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency	**1**
	R.4.2 System in place for sending and receiving health personnel during a public health emergency	**1**
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	**2**
	R.5.2 Internal and partner communication and coordination	**2**
	R.5.3 Public communication	**2**
	R.5.4 Communication engagement with affected communities	**2**
	R.5.5 Dynamic listening and rumour management	**1**
Points of entry	PoE.1 Routine capacities established at points of entry	**2**
	PoE.2 Effective public health response at points of entry	**1**
Chemical events	CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies	**1**
	CE.2 Enabling environment in place for management of chemical events	**2**
Radiation emergencies	RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	**2**
	RE.2 Enabling environment in place for management of radiation emergencies	**2**

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 a 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 in a more effective manner. 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. See detailed guidance on IHR (2005) implementation in national legislation at http://www.who.int/ihr/legal_issues/legislation/en/index.html. In addition, policies that identify national structures and responsibilities as well as the allocation of adequate financial resources are also important.

Target

States Parties should have an adequate legal framework to support and enable the implementation of all of their obligations and rights to comply with and implement the IHR (2005). In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even where new or revised legislation may not be specifically required under the State Party's legal system, States may still choose to revise some legislation, regulations or other instruments in order to facilitate their implementation and maintenance in a more efficient, effective or beneficial manner.

States Parties should ensure provision of adequate funding for IHR implementation through the national budget or another mechanism.

Mauritania level of capabilities

Mauritania has legal instruments and regulations ensuring compliance with the provisions of IHR (2005). A number of key instruments are in place for surveillance and response, such as:

- Decree No. 088-2015 of 12 March 2015, establishing the remit of the Minister of Health, the organization of the Ministry of Health central administration, and the IHR focal point and its tasks.

- Law No. 2010-042 of 12 July 2010 on the hygiene code (Article 3: health regulations; Article 55: creation of the national Codex Alimentarius committee).

- Order No. 01403 of 20 July 2013 establishing a monitoring unit for potentially epidemic zoonotic diseases.

- Order No. R-00105b of 24 September 2002 establishing the Mauritanian animal disease surveillance network (REMEMA).

In addition, Mauritania has carried out an assessment of relevant legislation, administrative instruments and regulations for implementation of IHR (2005), including:

- A 2011 plan to strengthen IHR implementation, drafted in the context of a request for an extension of the IHR implementation deadline.

- A review on the institutional and legal framework for risk and disaster reduction in Mauritania, conducted in March 2016, and the National Disaster Risk Management Action Plan drafted in October 2007.

- Cross-border agreements with neighbouring countries for public health emergencies, including: (i) the Mauritania/Mali and Mauritania/Senegal joint commissions, (ii) transhumance agreements with Senegal and (iii) the health cooperation agreement between Algeria and Mauritania, signed in Nouakchott on 23 April 1996, Official Journal of the People's Democratic Republic of Algeria, No. 061, 14 September 1997.

- Development of the National Strategy for Accelerated Growth and Shared Prosperity 2017-2030.

The National Health Development Plan 2012-2020 integrates the provisions of the IHR (2005) with the strategic aim of "controlling the main communicable diseases, including neglected tropical diseases" and "strengthening the health system." The coordination of legal and regulatory frameworks of the various sectors is provided through an interministerial emergency committee, chaired by the Prime Minister and established by Decree No. 2002-17 of 31 March 2002 on emergency relief organization.

Nevertheless, weaknesses persist in the dissemination and implementation of regulations that support implementation of the IHR (2005). In addition, coordination of legal and regulatory frameworks to support a One Health approach remains weak. A financing mechanism to strengthen a number of essential functions for IHR implementation is lacking.

Recommendations for priority actions

- Conduct a global assessment of the legislation and regulations of sectors implicated by IHR implementation.

- Put in place a financial mechanism for IHR (2005) implementation.

- Put in place a formal multisectoral coordination framework for IHR (2005) implementation, and develop guidelines and procedures to strengthen collaboration between sectors and with the national IHR focal point.

Indicators and scores

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005) – Score 2

Strengths/best practices
- National Disaster Risk Management Action Plan.

- Public health emergency laws, regulations, policies and strategies in place in various sectors.

- National Strategy for Accelerated Growth and Shared Prosperity 2017-2030.

- Designated IHR sectoral focal points working in synergy with the IHR national focal point.

- Fairly regular meetings with neighbouring country joint commissions.

Areas that need strengthening/challenges
- Conduct a global assessment of IHR-relevant legislation through in-depth study of the texts.

- Coordinate the development and implementation of regulations to implement the required IHR capacities using a multisectoral approach.

- Strengthen the revision and dissemination of legislation, regulations and implementation decrees.

P.1.2 The State can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with the IHR (2005) – Score 2

Strengths/best practices

- Inclusion of IHR requirements in national policies and strategies, including the National Strategy for Accelerated Growth and Shared Prosperity, the National Health Development Plan, and the Risk Management Project.

Areas that need strengthening/challenges

- Strengthen multisectoral coordination and collaboration in the drafting of new instruments to enable full compliance with the IHR (2005).

- Adjust legislation, regulations and administrative requirements to enable full compliance with the IHR (2005).

IHR coordination, communication and advocacy

Introduction

The effective implementation of the IHR (2005) requires multisectoral/multidisciplinary approaches through national partnerships for efficient and alert response systems. Coordination of nationwide resources, including the designation of a national IHR focal point, which is a national centre for IHR communications, is a key requisite for IHR implementation.

Target

The national focal point should be accessible at all times to communicate with the WHO IHR regional contact points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of national focal points, continuously update and annually confirm them.

Mauritania level of capabilities

Mauritania has three main frameworks to facilitate IHR coordination, communication and advocacy: (i) the National Epidemiological Surveillance Commission with regional and departmental committees; (ii) the Permanent Avian Influenza Surveillance Commission; and (iii) the joint monitoring unit for zoonotic diseases with epidemic potential. In addition, the country drafted a plan to strengthen implementation of the IHR (2005) in 2011, as part of its request for an extension of the implementation deadline in 2012.

The Department of Disease Control in the Ministry of Health was officially designated as the locus of the IHR national focal point in 2011. All ministries involved in implementation of the IHR (2005) officially named an IHR sectoral focal point. All sectoral focal points participated in IHR training sessions and were provided with materials and official guidelines. Due to the high mobility of staff in the ministries, a job description listing the functions of the focal point is needed to facilitate the handover of duties.

In addition, the country needs a national plan to strengthen multisectoral coordination, communication and advocacy of the IHR (2005), guided by the recommendations of this JEE report. The plan should cover the coordinating roles of the national focal point and sectoral focal points in outbreak response, as well as preparedness activities for timely reporting and rapid disease detection. The plan should be disseminated, widely introduced and implemented at the intermediary and peripheral levels of the health system.

Recommendations for priority actions

- Establish a multisectoral coordination mechanism at the central, regional and peripheral levels to enable compliance with IHR requirements and ensure ongoing monitoring and evaluation.
- Develop a communication strategy between the National Focal Point and other sectors.
- Strengthen the capacities of sectoral focal points.

Indicators and scores

P.2.1 A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR – Score 2

Strengths/best practices

- National Epidemiological Surveillance Commission with regional and departmental committees.

- Permanent Avian Influenza Surveillance Commission.

- Joint monitoring unit for zoonotic diseases with epidemic potential.

- Decree on the organization of the Ministry of Health with a technical adviser responsible for communications.

- Order on the establishment of the CNOUSP.

- Coordination meetings held with the commissions for outbreak control during crises.

- Officially designated IHR sectoral focal points.

Areas that need strengthening/challenges

- Update the 2012 national action plan to strengthen required IHR capacities.

- Establish a multisectoral, multidisciplinary coordination and communication framework to strengthen IHR implementation, communication and advocacy, that includes multisectoral and multidisciplinary coordination mechanisms.

- Establish an operational multisectoral committee to monitor IHR implementation and share information with stakeholders. Strengthen communication methods and IHR advocacy at all levels.

- Develop institutional and practical materials in consideration of the frequent changes of officials and focal points.

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

Support work coordinated by WHO, FAO and OIE to develop an integrated global package of activities to combat antimicrobial resistance, spanning human, animal, agricultural, food and environmental aspects (i.e. a One Health approach). Each country has: (i) its own national comprehensive plan to combat antimicrobial resistance; (ii) strengthened surveillance and laboratory capacity at the national and international levels following international standards developed as per the framework of the Global Action Plan; and (iii) improved conservation of existing treatments and collaboration to support the sustainable development of new antibiotics, alternative treatments, preventive measures and rapid point-of-care diagnostics, including systems to preserve new antibiotics.

Mauritania level of capabilities

Mauritania has essentially no capacity to limit and control antimicrobial resistance. With the exception of several studies on antibiotic residues in meat and milk, and one study on drug-resistant tuberculosis, little action has been taken. No procedures are in place to validate data on antimicrobial resistance; there is no national plan for detection and reporting of antimicrobial pathogens, no national plan to test priority pathogens and no designated national laboratory for antimicrobial pathogens. There are, however, six laboratories that have the technical capacity for antimicrobial detection/reporting: INRSP, the Military Hospital, Cheikh Zaed Hospital Centre, the National Hospital Centre, the National Office for Research and Development of Livestock, and Maurilab.

A pilot study on the surveillance of hospital-acquired nosocomial infections is underway at the Nouakchott National Hospital Centre in partnership with the INRSP, and surveillance training for personnel is being carried out. The nosocomial infection control committees of the hospitals, including an antibiotic commission for appropriate antibiotic use and control, are also in the process of being established.

A system to register and control the quality of medicines intended for humans is functional. The system for veterinary medicines is not yet functional.

Recommendations for priority actions

- Officially designate national reference laboratories for antimicrobial resistance.

- Establish a multisectoral, technical working group tasked with creating the terms of reference of the multisectoral framework and national detection, surveillance, reporting, prevention and control plans for health care-associated infections and antimicrobial stewardship activities as per WHO's global action plan on antimicrobial resistance (2015).

- Create and implement an antimicrobial resistance communication and awareness strategy aimed at professionals and the public.

Indicators and scores

P.3.1 Antimicrobial resistance detection – Score 1

Strengths/best practices

- Six laboratories can detect and report pathogens, or create antibiograms: the National Institute for Public Health Research, Military Hospital, Cheikh Zaed Hospital Centre, National Hospital Centre, the National Office for Research and Development of Livestock, and Maurilab.

- Several human and/or animal pathogens can be tested.

Areas that need strengthening/challenges

- Establish a national plan to detect and report antibiotic-resistant strains.

- Officially designate a national reference laboratory for antimicrobial resistance.

P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens – Score 1

Strengths/best practices

- A study on drug-resistant tuberculosis.

- Strong awareness of the issues and challenges surrounding antibiotic resistance.

Areas that need strengthening/challenges

- Establish a national surveillance plan for infections caused by antimicrobial-resistant pathogens (including, inter alia, the creation of sentinel sites).

P.3.3 Health care-associated infection (HCAI) prevention and control programmes – Score 1

Strengths/best practices

- Hospital infection control and prevention committees in 6 hospitals.

- 3 functional isolation units: Ebola treatment centre at kilometre point 15, the Nouakchott National Hospital Centre and the Kiffa Hospital Centre.

- Guidelines for infection prevention and control.

- More than 300 health professionals trained in prevention and control of health care-associated infections.

Areas that need strengthening/challenges

- Take steps to raise awareness of health care-associated infections.

- Create a system to evaluate the effectiveness of health care-associated infection prevention and control measures.

P.3.4 Antimicrobial stewardship activities – Score 1

Strengths/best practices

- A pharmacovigilance committee is in place, although only for the human health sector.

- Control procedures (the Delvotest) to monitor antibiotic residues in milk.

Areas that need strengthening/challenges

- Create a national plan for antimicrobial stewardship.

- Strengthen the quality control of medicines.

- Conduct a survey to determine if antibiotics are being used appropriately.

PREVENT

Zoonotic diseases

Introduction

Zoonotic diseases are communicable diseases and microbes 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 is of animal origin; and approximately 60% of all human pathogens are zoonotic.

Target

Adopted measured behaviours, policies and/or practices that minimize the transmission of zoonotic diseases from animals into human populations.

Mauritania level of capabilities

The Veterinary Services Department of the Ministry of Livestock, the Ministry of Health and the Ministry of the Environment and Sustainable Development, with support from the civil protection services, security forces and regional and local authorities, faced multiple outbreaks of Rift Valley fever in 1987, 1998, 2010, 2012 and 2015. The economic impact of the loss of herds was tremendous, and the outbreaks were tragically deadly for livestock keepers.

A joint monitoring unit for potentially epidemic zoonotic disease prevention and response was established through Government Order No. 1403 of 20 July 2013. This interministerial committee updates the authorities on the national health situation in the event of a zoonotic disease crisis. It is chaired by the Prime Minister and is responsible for coordinating activities between ministerial departments.

At the time of writing, Rift Valley fever, anthrax, Crimean-Congo haemorrhagic fever, rabies, highly pathogenic avian influenza, bovine tuberculosis, brucellosis, and Ebola virus disease are considered the zoonotic diseases of greatest public health concern by the Government.

Mauritania does not yet have an official One Health policy, but initiatives are under way to establish an integrated zoonotic disease control mechanism. These include: the monitoring unit, REMEMA, the Field Epidemiology Training Programme (FETP), and joint training for human health and veterinary personnel when deployment of the Rapid Response Team is needed. At the regional level, there is coordination between veterinary and public health services during times of crisis. A steering committee led by the Governor of each region is responsible for the coordination of surveillance and response activities during major public health events.

It should be noted that the Army health services are located on one third of the national territory not accessible to civil authorities. In isolated areas, military physicians and veterinarians provide services for the human and animal populations of those regions.

The Ministry of Livestock and the Ministry of Health have developed joint communication programmes for crisis periods.

The activities of REMEMA decreased with the end of major development and emergency programmes, including the Pan-African Rinderpest Campaign, the Pan African Program for the Control of Epizootics, and the United Nations Central Emergency Rehabilitation Fund. There are no established links between REMEMA and the IDSR human health surveillance network, and the joint monitoring unit is only active in

times of crisis. However, informal exchanges are frequent between the two network heads, particularly in cases of suspected zoonotic diseases.

Recommendations for priority actions

- Keep the joint monitoring unit active during non-crisis periods.
- Strengthen the REMEMA and IDSR epidemiological surveillance networks and establish formal ties between the two networks (e.g., through interministerial orders and decrees).
- Establish post-graduate executive training in epidemiological data processing and analysis.
- Test the effectiveness of coordination between structures through real-scale simulations.
- Develop programmes for information exchange during non-crisis periods.

Indicators and scores

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens – Score 3

Strengths/best practices
- Country-wide surveillance network with sufficient coverage.
- Community of livestock keepers with a good knowledge of common diseases.
- Veterinarians in all regions.
- Army health services in place in the most isolated regions.
- Interest of focal points in the sector.
- Strong government involvement in regional networks (e.g. the Mediterranean Animal Health Network).
- Sentinel herd monitoring for Rift Valley fever prevention and control.
- Emergency plans for a number of zoonotic diseases.

Areas that need strengthening/challenges
- Revitalise REMEMA.
- Share animal health information with human health services.
- Officially establish regular meetings of the monitoring unit during non-crisis periods.

P.4.2 Veterinary or animal health workforce – Score 3

Strengths/best practices
- A single, direct chain of command.
- Current and planned recruitment of new veterinarians.
- Veterinary training "from the start."
- Training available in field epidemiology.
- Ongoing education/training available.

Areas that need strengthening/challenges
- Establish plans for ongoing training for the entire health workforce.
- Organize joint zoonotic disease training for human and animal health sectors.
- Train newly recruited technicians.

P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional – Score 3

Strengths/best practices

- Control plans for a number of zoonotic diseases (e.g. highly pathogenic avian influenza and Ebola virus disease).

- Services are familiar with the preparation of emergency plans.

- Good coordination between human and animal health services during crises; regularly held meetings and joint communication; information is shared through the National Epidemiological Surveillance Commission and the joint monitoring unit.

Areas that need strengthening/challenges

- Strengthen zoonotic disease response capacities in due course, as they remain weak.

- Update existing emergency plans and draft new control plans for the other major emerging or neglected zoonotic diseases.

- Organize real-scale simulations of control activities for major zoonotic diseases.

Food safety

Introduction

Food- and water-borne diarrhoeal diseases are leading causes of morbidity and mortality. 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

State parties should have surveillance and response capacity for food- and water-borne disease risks or events. This requires effective communication and collaboration among the sectors responsible for food safety, and safe water and sanitation.

Mauritania level of capabilities

Mauritania has national food safety standards, legislation and regulations in place for all relevant sectors, and is a member of the International Food Safety Authorities Network (INFOSAN) and Codex Alimentarius. Five ministerial departments are involved in food safety, namely those responsible for health, livestock, fisheries, agriculture, and trade, in addition to various laboratories including two at the National Sanitation Inspection Office for Fishery and Fish Farming Products which are are ISO 17025 accredited.

However, surveillance and response capacity for food safety events remains very weak, and there is insufficient coordination between the various bodies involved.

Recommendations for priority actions

- Establish a framework and functioning coordination mechanisms between the various food safety authorities and the IHR national focal point.
- Develop an action plan to effectively respond to food safety-related events.
- Develop guidelines and operating procedures to effectively respond to food safety emergencies.
- Strengthen the capacities of inspection bodies and food quality control laboratories.

Indicators and Scores

P.5.1 Mechanisms for multisectoral collaboration established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases – Score 1

Strengths/best practices

- National food safety standards.
- Participation in the international network of food safety authorities, including INFOSAN and Codex Alimentarius.
- Food safety control and surveillance laboratories, some of which have technical capacities and qualified staff.

- Inspection and control services are in place by sector: health, livestock, agriculture, fishing, commerce, environment, etc.
- Consumer protection groups.

Areas that need strengthening/challenges

- Establish a surveillance mechanism for food safety-related events.
- Establish a national body to coordinate food safety surveillance and control activities.
- Train public veterinary health inspectors.
- Improve outbreak response, in particular to foodborne diseases.
- Develop a multisectoral national plan to ensure rapid response to food safety emergencies.

PREVENT

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 national biosafety and biosecurity system is in place, ensuring that especially dangerous pathogens are identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach are 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 are in place.

Mauritania level of capabilities

A group of biosafety and biosecurity trainers is available for INRSP staff. National laboratory staff training was carried out with technical and financial support from WHO and the European Union, and there is a vaccination policy is in place for health professionals at risk of contracting viral hepatitis. Training on waste management and the triple packaging system for the safe transport of potentially infectious specimens was conducted and biosafety officers were certified. A national biomedical waste management plan is in place at the level of the Ministry of Health.

However, Mauritania has no national regulations for the transport of infectious substances, there are insufficient national resources for the proper operation and maintenance of facilities and equipment, and no biosafety/biosecurity training programme.

Recommendations for priority actions

- Develop and implement biosafety and biosecurity legislation and related regulations.
- Identify national laboratories that work with pathogens and establish a monitoring system.
- Develop a national biosafety/biosecurity training programme in facilities and academic training schools.
- Strengthen national laboratory capacities for biosafety and biosecurity (INRSP, the National Office for Research and Development of Livestock, the National Sanitation Inspection Office for Fishery and Fish Farming Products, and University laboratories).

Indicators and Scores

P.6.1 Whole-of-government biosafety and biosecurity system in place for human, animal and agriculture facilities – Score 1

Strengths/best practices

- A national biomedical waste management plan at the level of the Ministry of Health.

Areas that need strengthening/challenges

- Develop and implement national biosafety and biosecurity legislation.

- Identify the national laboratories that store or handle pathogens and establish a monitoring system.

- Develop biosafety and biosecurity guidelines and periodically evaluate them.

P.6.2 Biosafety and biosecurity training and practices – Score 2

Strengths/best practices

- A group of biosafety and biosecurity trainers for INRSP staff.

- Funding for biosafety and biosecurity training for national laboratory workers through the support of WHO and the European Union.

- Health care workers vaccinated against hepatitis B.

Areas that need strengthening/challenges

- Develop and implement a biosafety and biosecurity training programme.

- Strengthen biomedical waste management.

Immunization

Introduction

Immunization is one of the most successful global health interventions and one of the most cost-effective ways to save lives and prevent disease. Immunizations are estimated to prevent more than two million deaths a year globally.

Target

A functioning 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.

Mauritania level of capabilities

Mauritania has an EPI that was established in 1977, with regional and departmental focal points, in the form of a multiyear plan identifying priority diseases to target, during both routine vaccinations and mass campaigns. Although human and financial resources are lacking overall, they are available for these activities.

WHO and the United Nations Children's Fund (UNICEF) are key country partners in EPI implementation. Measles-related deaths drastically dropped as a result of routine and mass immunization campaigns, the last of which was held in 2014. Vaccine coverage was estimated at 85% in 2016. Yellow fever vaccines are administered to pilgrims travelling to Mecca.

Vaccine supply is secured by a mechanism involving the Government and its partners, in line with the Global Vaccine Action Plan. A national system that ensures continuous cold chains as necessary for vaccine delivery throughout the central, regional, departmental and peripheral levels is in place. However, for some zones, the low population density and human and logistical requirements needed to reach communities makes it difficult to attain the target rates for coverage.

EPI assessments and reviews are held every three years (the last external review was in 2014), using vaccine coverage validation methods such as the Data Quality Self-Assessment, Lot Quality Assurance Sampling, and periodic vaccine coverage surveys. For data management, the District Health Information Software data management system is being used in pilot phase in three districts.

The national vaccine supply plan is aligned with the WHO Global Vaccine Action Plan, and an animal immunization campaign takes place annually.

Recommendations for priority actions

- Develop a plan to improve immunization coverage by strengthening financial and logistical resources.
- Implement a strategy to motivate vaccine personnel.
- Develop an immunization communication strategy aimed at communities.
- Organize simulation exercises or immunization campaigns to test vaccine delivery.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme – Score 3

Strengths/best practices

- Priority vaccine-preventable diseases are covered by EPI.

- National system to collect data on vaccine coverage.

- Free vaccines are administered in all public and private facilities.

- The surveillance system for coverage data includes: Data Quality Self-Assessment certification, Lot Quality Assurance Sampling, and periodic surveys on coverage rates.

- The national vaccine supply plan is aligned with the WHO Global Vaccine Action Plan.

- EPI is routinely assessed and reviewed.

- There is a specific budget line for funding vaccinations.

Areas that need strengthening/challenges

- Secure financial and logistical resources to implement mobile and advanced immunization strategies.

- Boost motivation of vaccine personnel.

- Strengthen vaccine communication and community outreach.

- Involve the community and civil society (NGOs) in the immunization process.

P.7.2 National vaccine access and delivery – Score 3

Strengths/best practices

- EPI focal points at the level of regions (wilaya) and districts (moughataa).

- National system ensures continuous cold chains as necessary for vaccine delivery throughout the central, regional, departmental and peripheral levels, with generators available in the event of a power failure.

- Measles catch-up campaign carried out in 2014.

- Development and dissemination of vaccine management tools at all levels.

- Mechanisms to guarantee a sustainable vaccine supply.

Areas that need strengthening/challenges

- Strengthen State infrastructure (vehicles, mobile clinics, etc.) to carry out immunization campaigns.

- Maintain equipment and materials.

- Educate communities on vaccine-preventable diseases and the EPI immunization calendar.

- Reach the goal of ensuring vaccine delivery to more than 80% of health structures, with systems in place to reach isolated communities.

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

Real-time biosurveillance with a national laboratory system and effective modern point-of-care and laboratory-based diagnostics.

Mauritania level of capabilities

The national laboratory system in Mauritania includes public health, veterinary, fishing, and university research structures. The Public health laboratory system is organized into three levels: peripheral, regional and central. The INRSP laboratories are capable of conducting core tests for HIV, tuberculosis, malaria, measles, viral haemorrhagic fevers, dengue, yellow fever, cholera, meningitis, Salmonella and shigella. At regional level, laboratories are capable of conducting core tests to detect HIV, tuberculosis, malaria and meningitis. A number of INRSP laboratories are taking part in an accreditation process and are affiliated with international, external quality programmes. As a result of Ebola virus disease preparedness efforts, operating procedures for the collection and transport of hazardous specimens were developed. To transport specimens, health officials use the means available: bush taxis, private trucks, ambulances, etc.

There is no national external quality assessment programme for laboratories, neither public nor private. There are no national laboratory quality standards, and most laboratories do not participate in a programme for quality assurance or equipment inspection and are not organized into an official network of laboratories.

Recommendations for priority actions

- Put in place a regulation outlining the organization of reference laboratories and enabling reinvigoration of the national laboratory network.

- Build laboratory capacities and reorganize internal transport systems for highly pathogenic specimens.

- Develop and apply guidelines and protocols for a quality management system for public health and veterinary laboratories.

- Establish an external assessment programme and a national quality assessment programme for laboratories at the peripheral level for diagnostics of diseases with epidemic potential.

Indicators and scores

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

Strengths/best practices

- The country is capable of conducting core tests in molecular biology, serology, cultures, polymerase chain reaction (PCR) and immunofluorescence.

- Collaboration with WHO reference centres for poliovirus and other major pathogens.

Areas that need strengthening/challenges

- Procure and maintain equipment, and ensure continuous supply of reagents and consumables.

- Establish a coordination framework that sets out activities and responsibilities, and designates reference laboratories.

D.1.2 Specimen referral and transport system – Score 2

Strengths/best practices

- Standard operating procedures for specimen collection, packaging and transport (developed for Ebola virus disease preparedness)

- Some personnel trained in the triple packaging technique for the transport of infectious substances.

- Training on referral methods for specimens collected in health structures for diseases under surveillance.

Areas that need strengthening/challenges

- Develop a specimen transport system.

- Train laboratory personnel in the preparation, packaging and transport of potentially hazardous biological substances.

- Establish a system for specimen transport to intermediary and/or national laboratories for advanced diagnostics.

D.1.3 Effective modern point-of-care and laboratory-based diagnostics – Score 2

Strengths/best practices

- At regional level, laboratories are capable of conducting core tests to detect HIV, tuberculosis, malaria and meningitis.

Areas that need strengthening/challenges

- Develop a national policy and strategy for laboratories.

- Develop a plan to improve the availability of point-of-care diagnostics in medical centres.

D.1.4 Laboratory quality system – Score 1

Strengths/best practices

- INRSP has laboratory oversight and training missions to develop public health laboratory capacity.

- INRSP laboratories are in the audit stage of the accreditation process; the National Sanitation Inspection Office for Fishery and Fish Farming Products laboratories are already ISO accredited.

- A number of laboratories participate in international external quality assessments.

DETECT

Areas that need strengthening/challenges

- Strengthen the national external quality assessment programme and ensure that all laboratories participate.

- Organize the supervision, control and inspection of laboratories.

- Develop and apply guidelines and protocols for a quality management system for public health and veterinary laboratories.

Real-time surveillance

Introduction

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

Target

Strengthened foundational indicator- and event-based surveillance systems that are able to detect events of significance for public health, animal health and health security; improved communication and collaboration across sectors and between sub-national, national and international levels of authority regarding surveillance of events of public health significance; improved country and intermediate level regional capacity to analyse and link data from and between strengthened, real-time surveillance systems, including interoperable, interconnected electronic reporting systems. 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 standards.

Mauritania level of capabilities

Indicator-based disease surveillance in Mauritania is conducted through implementation of the IDSR system, and a list of notifiable diseases is available. The IDSR technical guide was revised in 2015, followed up by training for trainers, and cascade training in 2016 for 250 health personnel from a various districts. A basic-level FETP training programme is in place, and training for a second cohort of health personnel is underway. In addition to IDSR, Mauritania carries out surveillance for specific diseases through a number of vertical programmes.

To oversee its surveillance activities, Mauritania has established: (i) a national epidemiological surveillance commission, (ii) a zoonotic disease joint monitoring unit, and (iii) a national multisectoral commission for avian influenza control.

The event-based surveillance system captures ad-hoc reports and some rumours, but needs to be optimized. For community-based surveillance, the initial phase of implementation has been underway since 2016. A system to collect information, data and retro information is in place, but quality indicators are weak for a number of diseases under surveillance.

There is no electronic reporting system for notifiable diseases within the IDSR framework. However, an assessment of Mauritania's capacity to implement such a system was carried out, and a roadmap for IDSR electronic surveillance was developed. There is a pilot project for an operational electronic reporting system for vaccine-preventable diseases and maternal death that makes available communication tools like smartphones in all the health districts and regions. Mauritania is in the process of establishing the use of District Health Information Software (DHIS2) trackers.

The capacity to confirm priority diseases at the regional and departmental levels is very weak. Laboratory data for a number of diseases such as measles, viral haemorrhagic fevers, and meningitis, are compiled by the surveillance and response service of the Department of Disease Control.

DETECT

The REMEMA network spans the entire country. A list of compulsorily notifiable animal diseases is available and includes 8 diseases of economic and/or zoonotic significance. The surveillance system is supported by guidelines and tools, including reporting, referral and collection forms. The REMEMA system database enables regular reporting to OIE, and a monthly report is issued and disseminated. Active surveillance is carried out during rainy seasons with sentinel herds in at-risk areas, and during crises, REMEMA works closely with the Ministry of Health. However, event-based surveillance and, more particularly, community-based surveillance capacities are not adequately developed. A network of trained livestock officials has been set up and trained at the most peripheral level. The network has proved effective in reporting information to veterinary services in real-time during anomalous events. However, there remains a shortage of epidemiologists in the animal health sector to conduct in-depth analyses.

Recommendations for priority actions

- Put in place an interoperable, interconnected, electronic real-time reporting system that includes laboratory data.
- Strengthen event-based (including community-based) surveillance and indicators by including the private and public sectors.
- Build data management and analytical capacity at all levels of the health pyramid.
- Establish a platform for sharing information between sectors.

Indicators and scores

D.2.1 Indicator- and event-based surveillance systems – Score 4

Strengths/best practices
- National system in place to collect data and provide feedback.
- Reporting systems in place for animal and human health sectors.
- Health personnel with training in IDSR, and health and veterinary personnel with training in field epidemiology.
- IDSR guidelines.
- List of compulsorily notifiable diseases.
- Weekly epidemiological summary issued by the Regional Departments for Health Welfare, presented to the weekly Council of Ministers meeting.

Areas that need strengthening/challenges
- Improve quality indicators (promptness and completeness) of the event-based surveillance system.
- Strengthen community-based surveillance.
- Implement IDSR in all districts.
- Establish a mechanism for real-time transmission of laboratory results.

D.2.2 Interoperable, interconnected, electronic real-time reporting system – Score 2

Strengths/best practices.
- Pilot project for electronic reporting (EPI and maternal death).

Areas that need strengthening/challenges
- Strengthen the pilot project for electronic reporting and ensure adequate funding.

D.2.3 Analysis of surveillance data – Score 3

Strengths/best practices

- Database for diseases under surveillance.
- Completeness and promptness of reporting for diseases targeted by EPI and diseases with epidemic potential.
- Weekly surveillance reports and monthly reports from the National System for Health Information.

Areas that need strengthening/challenges

- Build human resources capacities in epidemiology.
- Improve epidemiological surveillance data quality.
- Put in place a structured data management and analysis system.

D.2.4 Syndromic surveillance systems – Score 3

Strengths/best practices

- IDSR guide.
- Influenza sentinel surveillance system.
- Sentinel herd active surveillance system and community relay networks.
- Database of diseases under surveillance.

Areas that need strengthening/challenges

- Strengthen community involvement in the detection of anomalous syndromes.
- Improve the capacities of officers in peripheral health structures.
- Facilitate upward feedback.
- Establish a management and analysis system for incoming field data.

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.

Target
Timely and accurate disease reporting according to WHO requirements and consistent coordination with FAO and OIE.

Mauritania level of capabilities

Reporting a potential public health emergency to WHO is carried out according to the guidelines set forth in Annex 2 of the IHR (2005). However, a number of difficulties limit the performance of the IHR national focal point, as indicated earlier in the section, "IHR coordination, communication and advocacy." For example, there is a lack of standard operating procedures for reporting a potential public health emergency of international concern to WHO. Weak capacity in analysis of data collected from the districts (moughataa) and regions (wilaya) limit its effective use in decision-making.

The Regional Departments for Health Welfare report cases daily to the central level, and provide a weekly summary of the epidemiological situation, which is presented at the weekly Council of Ministers meeting.

At the level of animal health, reporting falls under the responsibility of the OIE national delegate (from the Veterinary Services Department of the Ministry of Livestock) and the focal point responsible for animal health reporting. Reporting is done online through the OIE World Animal Health Information System website, or as immediate notification for diseases subject to obligatory reporting, or as a six-monthly report for other diseases on the OIE list. There is no exchange of information or established procedures between the IHR focal point and the OIE delegate, and the two reporting systems are neither interoperable nor interconnected. The zoonotic disease control joint monitoring unit does integrate the human and animal health sectors, strengthening both risk analysis and reporting. However, this unit is only operational during crises.

Recommendations for priority actions

- Strengthen coordination mechanisms between sectors to improve the performance of IHR national focal points in evaluating health events.
- Strengthen the human and financial resource capacities of IHR national focal points and the OIE delegate responsible for reporting.
- Develop approval procedures for reporting a potential public health emergency of international concern to WHO.

DETECT

Indicators and scores

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

Strengths/best practices

- Designated IHR national focal points and sectoral focal points.

- Appointment of OIE national delegate responsible for reporting according to OIE procedures.

- Epidemiological surveillance service with 15 regional focal points, 55 focal points in the moughataas and 7 correspondents in health establishments.

- Monitoring unit for potentially epidemic zoonotic disease prevention and response.

- Training workshop on the IHR (2005) for sectoral focal points.

- Reporting of recent public health emergencies to WHO, in particular events linked to Rift Valley fever.

Areas that need strengthening/challenges

- Improve IHR national focal point coordination and cooperation mechanisms with WHO, OIE (through the OIE national delegate), and other relevant sectors.

- Strengthen the human and financial resource capacities of IHR national focal points and the OIE delegate.

- Further develop system procedures for reporting to WHO, FAO and OIE.

D.3.2 Reporting network and protocols in country – Score 2

Strengths/best practices

- IDSR Guide.

- Official designation of IHR national focal points and sectoral focal points.

- Simulation exercises for a case of viral haemorrhagic fever carried out at Nouakchott National Hospital Centre and the Ebola Treatment Centre; conclusions shared with the Minister of Health and his cabinet.

Areas that need strengthening/challenges

- Establish approval and reporting mechanisms for a potential public health emergency of international concern.

- Develop a simulation exercise programme.

- Develop internal procedures for timely reporting to WHO, and multisectoral coordination procedures for public health emergencies.

DETECT

Workforce development

Introduction

Workforce development is 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.

Target
States Parties should have a skilled and competent health workforce for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR (2005). This workforce includes physicians, animal health workers or veterinarians, biostatisticians, laboratory scientists and farming/livestock professionals, with an optimal target of one trained field epidemiologist (or equivalent) per of 200,000 population, all of whom can systematically cooperate to meet the core competencies of the IHR (2005) and the Performance of Veterinary Services.

Mauritania level of capabilities

Animal and human health personnel in Mauritania are available across all levels – national, intermediate, and local – of the health pyramid. However, these personnel are unequally distributed within the country and are insufficient, particularly in sectors such as animal health and in speciality areas such as epidemiology, biostatistics, and laboratory science, among others. The Human Resources Department of the Ministry of Health has developed a workforce development plan, which should soon be updated. A retention policy is in place that includes bonuses for employees working in so-called "difficult" zones. Mauritania has a faculty of medicine and five nursing and midwifery schools that supply the country with qualified personnel, in addition to the personnel trained in countries of the sub-region.

To develop field epidemiology capacities, Mauritania introduced a three-month field epidemiology basic level training programme focused on prevention and detection of, and response to diseases and major public health events at the national or global level. The first cohort of 36 personnel included 21 district chief physicians, 3 surveillance officers, 2 veterinarians from the National Office for Research and Development of Livestock, and 10 recently trained mentors. Training for a second cohort will be scheduled in the near future.

The public health workforce is financed through the State budget. With the support of the Regional Sahel Pastoralism Support Project, the Government recently put forth considerable effort to recruit public sector human health professionals and veterinarians to fill workforce shortages.

Recommendations for priority actions

- Create a multisectoral human resources development and strengthening plan that takes into account a basic mapping of IHR implementation requirements.
- Strengthen basic FETP training across all levels for the human and animal health workforce; develop FETP intermediate- and advanced-level training.

Indicators and scores

D.4.1 Human resources available to implement IHR core capacity requirements – Score 3

Strengths/best practices

- Multidisciplinary, trained rapid response teams.
- IDSR training for human health personnel.
- Bonuses allocated to remote health personnel, based on their location.
- Annual recruitment of public sector health professionals.

Areas that need strengthening/challenges

- Engage in human resources planning as required for implementation of the IHR (2005).
- Strengthen human and animal health personnel of all categories, both quantitatively and qualitatively.
- Ensure the availability of a skilled workforce to manage public health events.

D.4.2 FETP or other applied epidemiology training programme in place – Score 3

Strengths/best practices

- IDSR and field epidemiology training for health personnel; field epidemiology training for veterinarians.
- Trained personnel participate in epidemiological investigations.

Areas that need strengthening/challenges

- Provide FETP for personnel at all levels of the health pyramid in the human and animal sectors.

D.4.3 Workforce strategy – Score 3

Strengths/best practices

- Career plans for all categories of health professionals.
- Public health workforce financed by the State.
- Bonuses allocated to remote health personnel, based on their location.

Areas that need strengthening/challenges

- Manage staffing projections.
- Develop and implement a human and animal health workforce development strategy.

DETECT

RESPOND

Preparedness

Introduction

Preparedness includes the development and maintenance of national, intermediate and community/primary response level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. Other components of preparedness include mapping of potential hazards, the identification and maintenances of available resources, including national stockpiles and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.

> ### *Target*
> *The effective implementation of the IHR (2005) requires multisectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the sustainable functioning of a national IHR focal point (NFP) is a key requisite for IHR (2005) implementation. The NFP should be accessible at all times to communicate with the WHO IHR Regional Contact Points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of NFPs, continuously update and annually confirm them.*

Mauritania level of capabilities

Mauritania has no national public health emergency preparedness and response plan. However, an interministerial committee is in place for crisis management, and a ministerial decree guarantees the availability of financial resources (a budget line, environmental funds for pollution management), logistics (ambulances, disease kits, isolation facilities, medicines) and human resources (rapid response teams, surveillance focal points, experts) during emergencies. There are a number of targeted plans, including response plans for cholera, meningitis, avian influenza, and Ebola virus disease. In 2007, the Ministry of the Environment developed a National Disaster Risk Management Action Plan with the support of the United Nations Development Programme. The plan has been revised for the period 2015-2030 and covers response to natural disasters, including health events, at all levels. There is also a National Disaster Risk Management Action Plan 2015-2018, but greater precision is needed before the plan can be implemented.

Nevertheless, key components of the IHR (2005) are not implemented. In particular, the National Disaster Risk Management Action Plan has not been rolled out as its operating procedures are not yet in place. Developing those procedures would require the participation of all sectors and a coordination and communication system. The procedures must be developed on the basis of available resources.

Several evaluations of animal health emergency management were carried out in Mauritania. In addition, animal health risk mapping is regularly done for major pathologies such as Rift Valley fever. In the area of human health, in 2016 the country mapped the availability of human resources in hospital facilities, but it has not yet developed mapping of human and material resources for all health structures. This mapping should also include country-specific risks and the necessary resources needed to respond to them, as per IHR guidelines.

The decree on emergency relief organization designates an interministerial committee chaired by the Prime Minister and including the Armed Forces Minister as a member. At the regional level, the Governor (Wali) chairs the regional commission. The specific provisions on armed forces interventions are related to emergencies involving national security.

Recommendations for priority actions

- Develop a national mutli-hazard public health emergency preparedness and response plan that draws from existing plans and their associated procedures.

- Establish a risk analysis and communication unit.

- Routinely carry out simulation exercises to test the developed plan.

Indicators and scores

R.1.1 National multi-hazard public health emergency preparedness and response plan developed and implemented – Score 1

Strengths/best practices
- Several existing preparedness and response plans for specific diseases.

- Human, logistic and financial resources are available.

- Training for rapid response teams and a field epidemiology training programme.

Areas that need strengthening/challenges
- Develop a national multi-hazard public health emergency preparedness and response plan.

- Improve human resources, logistic and financial capacities.

R.1.2 Priority public health risks and resources mapped and utilized – Score 1

Strengths/best practices
- Country situation analysis report showing a reduction of risks and disasters in 2015.

- Mapping of the availability of human resources in hospital facilities in 2016.

Areas that need strengthening/challenges
- Map the public health emergency risks and resources at the national level.

RESPOND

Emergency response operations

Introduction

A public health emergency operations centre 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**
>
> *Country with public health emergency operations centre (EOC) functioning according to minimum common standards; maintaining trained, functioning, multisectoral rapid response teams and "real-time" biosurveillance laboratory networks and information systems; as well as trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency.*

Mauritania level of capabilities

Mauritania has a formal collaboration and information-sharing platform in place to manage emergency response, coordinated by COVACC and the National Epidemiological Surveillance Commission. COVACC has extensive human and technical resources to respond to civil security events. It is equipped to coordinate all sectors and provide the surge capacity needed to respond to all types of crises. Multidisciplinary rapid response teams have been trained and simulation exercises carried out for handling suspected Ebola virus disease cases.

CNOUSP was established by the Ministry of Health in September 2016 and is overseen by a multisectoral strategic committee. Its aim is to act as a command and coordination centre during crises, and an analysis and communication centre regrouping all relevant ministers and partners to respond to public health events. Funds for these operations have been designated and included in the Ministry of Health budget for public health emergencies. The centre facilities are being put into place, and the establishment of peripheral units in the regions is planned for soon.

CNOUSP needs an implementation plan defining coordination mechanisms and stakeholder responsibilities before operating procedures can be developed, and a coordinator has been appointed to that effect.

Recommendations for priority actions

- Develop coordination mechanisms between CNOUSP and other sectors.
- Implement the CNOUSP action plan, and develop emergency operating procedures and plans for all types of IHR-related events.
- Finalize partnership arrangements between CNOUSP and COVACC and define their operating rules.

Indicators and scores

R.2.1 Capacity to activate emergency operations – Score 1

Strengths/best practices

- CNOUSP coordinator has been appointed and trained.

- Multisectoral rapid response teams are in place and trained.

- Funds are designated for CNOUSP operations in the 2017 State budget.

- The COVACC can be activated in the event of a major emergency.

- Workshop held with various stakeholders for implementation of the CNOUSP.

- 24-hour call centre available for emergencies.

Areas that need strengthening/challenges

- Strengthen operational capacities of CNOUSP.

- Ensure CNOUSP human resources training.

- Define interactions between CNOUSP and COVACC.

R.2.2 EOC operating procedures and plans – Score 1

Areas that need strengthening/challenges

- Develop operating procedures and plans.

- Systematize information sharing on outbreaks between the various stakeholders and sectors.

- Define operating procedures with COVACC.

R.2.3 Emergency operations programme – Score 3

Strengths/best practices

- Simulation exercises were carried out for a suspected case of viral haemorrhagic fever, and the conclusions were shared with the Ministry of Health and WHO.

Areas that need strengthening/challenges

- Develop a simulation training programme and arrangements for implementing the resulting recommendations.

R.2.4 Case management procedures implemented for IHR relevant hazards – Score 2

Strengths/best practices

- Existence of case management guidelines for priority diseases and IHR relevant hazards.

- Standardized operating procedures available for the management and transport of potentially infectious Ebola virus disease patients.

- Patient referral and transportation mechanism in place.

- Trained rapid response teams.

Areas that need strengthening/challenges

- Establish and implement case management procedures for all IHR-relevant hazards.

- Strengthen and standardize the case management mechanisms already in place for IHR-relevant hazards.

RESPOND

Linking public health and security authorities

Introduction

Public health emergencies pose special challenges for law enforcement, whether the threat is naturally occurring (e.g. flu pandemics) or manmade (e.g. the anthrax terrorist attacks). 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 in case of a biological event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide and/or request effective and timely international assistance, such as to investigate alleged use events.

Mauritania level of capabilities

Regional and departmental outbreak control committees have a multisectoral mandate and ensure coordination between the various stakeholders as public health events unfold. In addition, Mauritania has developed a consultative framework for emergencies and security with neighbouring countries (joint commissions) and there is close cooperation with authorities in border regions. Specifically, Mauritania has been able to establish transhumance agreements with Senegal and Mali for nomadic herd management.

Information is shared between public health officials and state authorities responsible for security, namely through information bulletins and weekly epidemiological reports presented at the Council of Ministers meeting. The Interpol office in Mauritania is attached to the Directorate-General of Security.

COVACC, established by civil security authorities with the support of NATO (the North Atlantic Treaty Organization), is prepared to mount an all-sector response during crises that threaten the safety of populations. COVACC is due to organize its interactions with various sectors, including the public health sector, in the coming months.

Mauritania regrets that no joint simulation exercises have been carried out, despite its willingness to perform them.

Recommendations for priority actions

- Strengthen coordination mechanisms between public health authorities and national security authorities.
- Build the capacities of intervention and relief teams in crisis situations, as needed.
- Establish a joint simulation exercise programme.
- Establish a national fund for emergencies.

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 event – Score 2

Strengths/best practices
- Legal framework in place for coordination at national, regional and departmental levels.

- Interministerial commission responsible for emergency coordination chaired by the Prime Minister.

- National epidemiological surveillance commission and regional and departmental outbreak control committees.

- Weekly communication on the epidemiological situation at the Council of Ministers meeting and information bulletins on public health rumours.

- Joint cooperation commissions with neighbouring countries.

- Regular contact at the level of regional and departmental authorities.

- Regular meetings of joint commissions.

- COVACC for crisis monitoring, alerts and management.

Areas that need strengthening/challenges

- Strengthen coordination mechanisms between public health authorities and security officials, including through COVACC.

- Carry out joint simulation exercises.

- Improve public health cooperation mechanisms with bordering countries.

- Establish multisectoral collaboration with appropriate mechanisms for an effective public health emergency response.

- Ensure the rapid availability of funds for emergency management.

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 response to a public health emergency.

Target

National framework for transferring (sending and receiving) medical countermeasures, and public health and medical personnel from international partners during public health emergencies.

Mauritania level of capabilities

Mauritania has a national relief organization plan (the ORSEC plan) to manage emergency relief through an interministerial committee under the authority of the Prime Minister. The ORSEC plan covers procedures for sending and receiving medical countermeasures and deploying personnel during disasters.

Outside of disasters, Mauritania has no plan that defines the procedures and decision-making process for sending and receiving medical countermeasures during public health emergencies. However, stockpiles are available to respond to some specific emergencies, and Mauritania has agreements with manufacturers, distributors and partners (e.g., Central Purchasing of Medicines, Medical Consumables and Equipment (CAMEC), Central Purchasing of Livestock Inputs (CAIE), WHO, UNICEF and FAO) to secure additional medical countermeasures if needed. Personnel have been identified to oversee the logistics of sending and receiving supplies. Mauritania has no capacity to produce antibiotics, vaccines, reagents and laboratory supplies.

Procedures for sending and receiving health personnel during a public health emergency are not defined and should be part of a plan that takes into account regulatory and licensure concerns.

Recommendations for priority actions

- Develop, test and implement a plan for sending and receiving medical countermeasures during a public health emergency.
- Develop, test and implement a personnel deployment plan for a public health emergency.
- Encourage the establishment of partner agreements between Mauritania and other states and international partners for the exchange of medical countermeasures or personnel during a public health emergency.

Indicators and scores

R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency – Score 1

- Strengths/best practices

- Stockpiles of medical countermeasures.

- Logistics personnel tasked with sending and receiving medical countermeasures.

- Streamlined supply management procedures at the Department of Financial Affairs.

- Adequate storage warehouses at the central level (CAMEC, CAIE).

- Agreements with manufacturers and distributers to secure medical countermeasures (CAMEC, CAIE) and support from international organizations (WHO, UNICEF, FAO).

- Decentralization of CAMEC depots in a number of wilayas.

Areas that need strengthening/challenges

- Develop procedures for sending and receiving medical countermeasures.

- Ensure the availability of qualified personnel responsible for logistics.

- Develop and implement a medical countermeasures deployment plan.

R.4.2 System in place for sending and receiving health personnel during a public health emergency – Score 1

Strengths/best practices

- Partner agreements with international organizations (WHO, FAO-OIE) for personnel deployment.

Areas that need strengthening/challenges

- Identify personnel resources available in other sectors (animal health, environment, agriculture) to be deployed during public health emergencies.

- Develop and implement a personnel deployment plan for public health emergencies, and develop procedures to manage deployment.

RESPOND

Risk communication

Introduction

Risk communications should be a multilevel and multifaceted process which 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. Communications of this kind promote the establishment of appropriate prevention and control action through community-based interventions at individual, family and community levels. Disseminating the information through appropriate channels is essential. Communication partners and stakeholders in the country need to be identified, and functional coordination and communication mechanisms should be established. In addition, the timely release of information and transparency in decision-making are essential for building trust between authorities, populations and partners. Emergency communications plans should be tested and updated as needed.

Target

States Parties should have risk communication capacity which is multi-level and multi-faced real-time exchange of information, advice and opinion between experts and officials or people who face a threat or hazard to their survival, health or economic or social well-being so that 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 communication, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.

Mauritania level of capabilities

In terms of risk communication capacities, plans developed by Mauritania (e.g. ORSEC, outbreak response, avian influenza, Ebola virus disease, meningitis) include a communication component. Platforms are in place to transmit information through national channels.

Communication units and official internal communication mechanisms with stakeholders and partners are established in various government ministries to respond to major crises.

In terms of preparedness capacities, two simulation exercises were carried out for a case of haemorrhagic fever to test coordination and communication with partners. However, it should be noted that there are insufficient financial resources for risk communication activities. There are also gaps in coordination, particularly at the outset of an epidemic, as shown by the Rift Valley fever outbreak in 2015.

Recommendations for priority actions

- Establish an official framework for risk communication coordination.
- Develop a national strategic multi-hazard communication plan that takes into account individual existing plans.
- Develop and disseminate communication operating procedures for emergencies.

- Build the communication risk capacities of stakeholders at all levels.

- Develop and disseminate rumour management procedures.

Indicators and scores

R.5.1 Risk communication systems (plans, mechanisms, etc.) – Score 2

Strengths/best practices

- Action plans for a number of diseases include a communication component.

- Dedicated technical services for communication.

- Official mechanisms for the dissemination of information to the public.

- A training workshop carried out on risk communication during emergencies.

Areas that need strengthening/challenges

- Formally establish a framework for multisectoral risk communication coordination.

- Develop a multi-hazard, multisectoral risk communication plan.

- Strengthen communication structures through the allocation of additional human resources.

- Build the risk communication capacities of stakeholders at all levels.

- Develop risk communication operating procedures.

R.5.2 Internal and partner communication and coordination – Score 2

Strengths/best practices

- Coordination meetings held with communication partners and stakeholders during emergencies.

- Two simulation exercises were carried out to test risk communication capacities in emergencies.

- The weekly epidemiological situation is presented at each Council of Ministers meeting.

Areas that need strengthening/challenges

- Formalize coordination mechanisms for risk communication.

- Put in place a rapid mobilization mechanism for the provision of financial resources for communication needs during emergencies.

- Put in place a mechanism for routine sharing of information and experiences with partners.

- Develop a programme of simulation exercises to strengthen collaboration between all stakeholders, including partners.

R.5.3 Public communication – Score 2

Strengths/best practices

- There is a designated government spokesperson.

- Communication channels are in place for emergencies.

- Social media is used to convey information.

- Announcements are translated into local languages during emergencies.

- Text messages are used to effectively reach communities.

RESPOND

Areas that need strengthening/challenges

- Improve the strategy for formulating and disseminating messages through appropriate channels.

- Use research data to develop and target communication messages to specific audiences.

R.5.4 Communication engagement with affected communities – Score 2

Strengths/best practices

- There is a social mobilization working group.

- Communication stakeholders are involved in communication campaigns, at all levels.

- The CNOUSP has a call centre.

- The media, civil society stakeholders and opinion leaders (e.g. religious leaders) are involved in public communication.

Areas that need strengthening/challenges

- Build stakeholder capacities in community mobilization strategies.

- Develop mechanisms that allow for feedback on the community's perception of communication messages.

R.5.5 Dynamic listening and rumour management – Score 1

Strengths/best practices

- Telephone hotline to receive alerts.

- Rumour collection register.

- Unit responsible for the surveillance of rumours and false information.

- Information monitored in the media and social media.

Areas that need strengthening/challenges

- Routinely assess communication strategies to address rumours.

- Develop procedures for rumour management and false information, and define shared communication channels with partners.

- Establish mechanisms to monitor the effectiveness of methods or messages used to disprove a rumour in order to adapt them accordingly.

OTHER IHR-RELATED HAZARDS AND POINTS OF ENTRY

Points of entry

Introduction

All core capacities and potential hazards apply to "points of entry" 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.*

Mauritania level of capabilities

Mauritania has five officially designated points of entry: Nouakchott–Oumtounsy International Airport, the Autonomous Port of Nouakchott (the Friendship Port), and the ground crossings Bac de Rosso (bordering Senegal), Nouadhibou PK 55, and Gogui (bordering Mali).

Relevant stakeholders in this sector include the Ministries of Health, Livestock, Agriculture, Environment, the Interior, Finance, Defence, Transportation, and Fishing. The Department of Public Hygiene is responsible for mosquito control and implementation of the integrated vector control plan 2017-2020.

The airport has an emergency management plan, but it does not take into account public health emergencies. In 2015, the Cooperative Arrangement for the Prevention of Spread of Communicable Disease through Air Travel (CAPSCA) carried out an evaluation to assess emergency management capacities at the airport. The Country has implemented most of the resulting recommendations, including a second treatment room on the aerodrome located in front of customs. The team of international experts visited the points of entry and determined that adequate medical services and equipment were partially in place at the port, fully in place at the airport, and non-existent at ground crossings.

Mauritania underscores its lack of a national public health emergency contingency plan for points of entry, and the absence of formal coordination and communication mechanisms between the various organizations working at points of entry. Moreover, health and administrative officials note the lack of routine technical and operational training sessions.

Recommendations for priority actions

- Strengthen medical services, equipment and ambulances at points of entry.
- Strengthen health inspection services at points of entry.

OTHER

- Develop, disseminate and test a national public health emergency contingency plan for points of entry.
- Develop multisectoral coordination and communication mechanisms (standard operating procedures, guides and guidelines) for points of entry.
- Develop standard operating procedures for cross-border coordination and communication.
- Assess the capacities required for points of entry.

Indicators and scores

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

Strengths/best practices

- Adequate medical services and equipment are in place at the airport.
- Mosquito control is carried out by the Department of Public Hygiene in alignment with the integrated vector control plan.
- Trained staff are in place.
- Officers responsible for border surveillance have received training on Ebola virus disease protocols.
- IHR focal points have been designated and trained for points of entry.
- Staff implicated by airport emergency management have been identified.

Areas that need strengthening/challenges

- Strengthen surveillance and inspection of boats and planes arriving at points of entry.
- Strengthen medical services and equipment in the port and ground crossings.
- Improve logistic capacities (e.g., access to ambulances, care facilities) at points of entry.
- Put in place functioning inspection services at all points of entry.
- Provide appropriate medical services for case management.

PoE.2 Effective public health response at points of entry – Score 1

Strengths/best practices

- Airport emergency management plan.
- CAPSCA assistance visit to the Nouakchott–Oumtounsy International Airport.
- Fifth meeting of CAPSCA-Africa-Nouakchott.
- IHR Training for point-of-entry sectoral focal points.

Areas that need strengthening/challenges

- Perform a more in-depth assessment of capacities for land and port points of entry, and compare them to the required IHR core capacities.
- Develop and implement a national, multisectoral public health emergency contingency plan at points of entry.
- Identify functional coordinating mechanisms (information exchanges, standard operating procedures, etc.) at points of entry.
- Develop simulation exercises for public health emergencies at points of entry.

Chemical Events

Introduction

States Parties should have surveillance and response capacity for chemical risk or events. This requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal.

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.

Mauritania level of capacities

The Department of Pollution and Environmental Emergencies is the responsible authority for chemical surveillance and control. With the support of the United Nations Environment Programme, studies have been carried out over the last five years on the following: (i) a national profile to assess chemical management capacity, (ii) the environmental and health impact of chemicals, and (iii) the costs and benefits of chemical management. Mauritania has developed a chemical, biological, radiological and nuclear plan but has no specific plan to cover the public health aspects of a chemical event or emergency, and there is no mechanism in place to monitor the health impact of chemical pollution. The current human and financial resources are considered insufficient to meet chemical safety needs.

Mauritania has ratified international chemical conventions/agreements, including the Rotterdam, Stockholm and Basel conventions. There are designated focal points, and Mauritania takes part in international chemical/toxicological networks such as INTOX through the United Nations Development Programme.

Recommendations for priority actions

- Develop legislation for the global management of all chemical events, including public health management of chemical incidents.
- Develop a multisectoral action plan for the management of chemical incidents and emergencies
- Develop guidelines for monitoring, detecting and responding to chemical events, intoxication and poisoning.
- Put in place an adequately resourced poison centre.

Indicators and scores

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

Strengths/best practices
- The Department of Pollution and Environmental Emergencies / Ministry of the Environment is responsible for the import, surveillance and control of chemicals in collaboration with the Department of Environmental Control.

OTHER

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- A Disaster Risk Management Plan (2007) provides a framework for managing emergencies, and was implemented during the Nouakchott beach oil pollution incident in 2015.

Areas that need strengthening/challenges

- Develop guidelines and manuals for the surveillance, assessment and health management of chemical events, intoxication and poisoning.

- Establish a poison centre.

- Develop a surveillance system for detection of chemical incidents and sentinel events.

- Establish routine environmental monitoring (water, air, soil, sediment and consumer products) with regard to chemical hazards, and strengthen laboratory analysis capacity.

- Strengthen the human and financial resources required to meet the needs for chemical safety.

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

Strengths/best practices

- A chemical, biological, radiological and nuclear plan is in place; the chemical component is implemented by the Department of Pollution and Environmental Emergencies and identifies existing capacities.

- Legislation on chemical management is being drafted and is expected to come into force in 2018. The law should include a public health component and a national coordination committee.

- Emergency management is multisectoral and is carried out by emergency committees within the framework of the Disaster Risk Management Action Plan (2007). However, there is no public health plan in place for chemical events, which are managed by the Ministry of the Environment.

- Mauritania takes part in international chemical/toxicological networks.

- In the event of a public health emergency of chemical origin, funds can be released through the Environment Intervention Fund (Decree No. 2010-048 on the establishment of an Environment Intervention Fund).

Areas that need strengthening/challenges

- Update legislation on chemicals.

- Finalize the national coordination framework for chemicals, including the draft law underway.

- Develop and implement a public health action plan for the management of chemical emergencies. A Health-Environment focal point should be immediately designated within the Department of Pollution and Environmental Emergencies.

- Create a chemical database at the Ministry of the Environment, taking into account existing data on groups who stock chemicals (e.g., Ministry of Agriculture, oil and mining companies).

- Implement a system to manage chemical residue, i.e. from medical laboratories. The storage and treatment of chemical waste is at the discretion of users and managed by individual procedures.

Radiation emergencies

Introduction

States Parties should have surveillance and response capacity for radionuclear hazards/events/emergencies. This requires effective communication and collaboration among the sectors responsible for radionuclear management.

> **Target**
> *States Parties with surveillance and response capacity for radiological and nuclear hazards/events/ emergencies. This requires effective communication and collaboration among the sectors responsible for radiological and nuclear emergency management.*

Mauritania level of capabilities

Mauritania has a National Authority for Radiation Protection, Nuclear Safety and Security under the direction of the Prime Minister, who is responsible for the management, surveillance and control of radiological materials. There is national legislation on nuclear safety and security: Law No. 2010-009 of 20 January 2010 on nuclear energy, and Decree No. 2012-170, enforcing certain provisions of that Law. In addition, Mauritania has a national nuclear security detection strategy and an integrated nuclear security support plan. Training exercises for response to radiological emergencies and other chemical, biological, radiological and nuclear events were carried out in 2016 in collaboration with the European Union centres of excellence. Human resources are in place to respond to radiological emergencies.

Financial resources, however, are insufficient to mount a robust response to radiological emergencies. Should a radiological event occur, a national, multisectoral radiological emergency committee would be charged with response coordination. Domestic transport of radioactive materials and specimens, and management of radioactive waste, including waste from hospitals and medical services, is regulated by Decree No. 2012-170, which incorporates many of the International Atomic Energy Agency regulations and the International Basic Safety Standards for radiation protection.

To promote safety and security and facilitate cooperation and information exchange, in 2011 Mauritania adhered to the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. However, Mauritania has not yet developed procedures for risk assessment in radio-nuclear surveillance/monitoring to trigger and mount a response of suitable composition and magnitude.

Recommendations for priority actions

- Develop guidelines and protocols for risk assessment in surveillance, care for radiation exposure, and food control.
- Draft, disseminate and test a national multisectoral radiological emergency action plan for radiological emergencies.
- Develop and roll out a simulation training programme for radiological emergency response.

OTHER

Indicators and scores

RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies – Score 2

Strengths/best practices

- National nuclear security detection strategy.

- Mauritanian National Authority for Radiation Protection, Nuclear Safety and Security.

- National integrated nuclear security support plan.

- Available human resources to meet the needs for nuclear security.

Areas that need strengthening/challenges

- Mobilize financial resources for radiological security and safety.

- Develop risk assessment mechanisms.

- Monitor radiation levels in food.

- Implement effective strategies and plans for radiological security and safety.

- Develop and implement risk assessment guidelines and protocols.

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

Strengths/best practices

- National multisectoral radiological emergency committee.

- Radiological Emergency Response Training Exercises were carried out in 2016 in collaboration with the European Union centres of excellence.

- A security plan for the national and international transport of nuclear and radioactive materials is established under Decree No. 2012-170, in accordance with conditions set forth by the International Atomic Energy Agency and the International Basic Safety Standards.

- National legislation on nuclear safety and security.

Areas that need strengthening/challenges

- Develop and implement a national multisectoral action plan for radiological emergencies.

- Roll out a simulation training programme.

Appendix 1: JEE background

Mission place and dates

Nouakchott, Mauritania, from 27–31 March 2017

Mission team members

- Stéphane de la Rocque, Switzerland, WHO (team lead)
- Mady Ba, Senegal, WHO (team co-lead)
- Mohammed Bengoumi, Tunisia, FAO
- Daniel Bourzat, France, OIE
- Lugemba Budiaki, Burkina Faso, WHO
- Bamba Chao, Côte d'Ivoire, Ministry of Health
- Aloyse Diouf, Senegal, Ministry of Health
- Margherita Ghiselli, the United States of America, CDC
- Chris Murrill, the United States of America, Centers for Disease Control and Prevention (CDC)
- Soatiana Rajatonirina, Congo, WHO
- Roland Wango, Congo, WHO
- Allie Pasieka, Switzerland, independent writer
- Daniel Yota, Burkina Faso, WHO

Objective

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

The JEE process

The JEE process is a peer-to-peer review. The entire external evaluation, including discussions around the scores, the strengths, the areas that need strengthening, best practices, challenges and the priority actions should be 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, 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 several days, which limited the amount and depth of information that could be managed.

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

Key host country participants and institutions

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- Mr Maham Abdellahi, Port Nurse

- Mr Mohamed Lemine Abderrahmane, Ministry of Health

- Mr Alioune Ould Ahmed Abeïd, Epidemiological Surveillance, Department of Disease Control/Ministry of Health

- Dr Boueye Abeïdi, Ministry of Health

- Colonel Dr Abdellah Aboumediène, Ministry of National Defence

- Mr Ahmed Kader Ahmed, Health Education/Department of Basic Health and Nutrition, Ministry of Health

- Mr Mbodj NDoudory Aliou, National Civil Aviation Agency

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- Mr Ahmed Ahmed Lobeïd, Department Head, Regional Department of Health Welfare - West

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- Mr Mohamed Ould Mbrarek, Ministry of Fisheries and the Marine Economy

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- Dr Sidi Abdallah El Wavi, Veterinary Services Department/Ministry of Agriculture

- Mr Abderrahmane Mohamed Abdel Wedad, National Civil Aviation Agency

- Dr Md Mahmoud Abdel Wedoud, National Authority for Radiation Protection, Nuclear Safety and Security

- Dr Daogo Sosthème Zombre, WHO Country Office, Mauritania

Supporting documentation provided by host country

- Institutional and legal framework review of risk and disaster reduction in Mauritania, June 2016

- Law No. 2010-042 of 12 July 2010 on the hygiene code

- Law No. 2010-022 on pharmacies

- National Health Policy 2017-2030

- Decree No. 088-2015 of 12 March 2015 establishing the remit of the Minister of Health, the organization of the central Ministry of Health administration, and the IHR focal point and its tasks

- Decree on the establishment and organization of the National Public Health Research Institute, 2005

- Order establishing the national epidemiological surveillance commission, 2007

- Joint Order No. 01403 of 20 July 2013 establishing a monitoring unit for zoonotic diseases with epidemic potential

- National health policy 2017-2030

- National hygiene promotion strategy, 2015

- Law No. 2000-044 on the Mauritania Pastoral Code

- Law No. 2004-024 of 13 July 2004 on the Livestock Code

- Agropastoral Framework Law No. 2013-024

- Decree No. 101-2009 establishing the National Commission for Veterinary Medicine Marketing Authorization and its functions

- Decree No. 102-2009 on veterinary pharmacy regulations

- Decree No. 72-122 laying down the conditions for issuance of the professional butcher's license

- Decree No. 670-2000, on the opening of two veterinary health inspection and control offices for animals and animal products entering national territory through the Nouakchott port or airport.

- Decree No. 183-2016 regulating the import and export of animals and animal products

- Decree No. 182-2016 on the import, manufacture and distribution of food

- Decree No. 154-2016 repealing and replacing Decree No. 65/153 of 19 October 1965 on Health Inspection regulations and the safety of products of animal origin intended for human consumption

- Decree No. 139-2016 establishing the conditions for genetic improvement of domestic animal species

- Decree No. 132-69 establishing regulations for the Animal Health Policy

- Decree No. 115-2016 on urban and inter-urban transport

- Decree No. 103-2009 on the organization and functioning of the National Order of Veterinarians

- Decree No. 059-97 establishing the Nouakchott Slaughterhouse Company, a mixed ownership company

- Decree No. 007-2017 setting out the responsibilities of the Ministry of Livestock and the organization of the Department's central administration

- Order No. 015-2012 on the organization of livestock markets, slaughtering environments and the distribution of red meat in Nouakchott

- Order No. 1042-2002 establishing the conditions of import, possession and sale of veterinary vaccines

- Order No. 940-2016 establishing the organization, control and inspection of hatcheries and parent stock poultry farms

- Order No. 939-2016 establishing the organization, control and inspection procedures for broiler and layer farms

- Order No. 938-2016, establishing the procedures for veterinary inspections

- Order No. 904-2010 supplementing certain provisions of Order No. 394 of 3 February 2010 designating Mauritania's obligatory border crossings

- Order No. 2276-2012 establishing the operating and control procedures for veterinary medicine wholesale outlets, veterinary clinics and pharmacies, and veterinary medicine depots, subject to control by the veterinary services

- Order No.119-2016 on the organization of the regional delegation of the Ministry of Livestock

- Order No. 1056-2002 establishing REMEMA

- Transhumance agreement of 25 April 2006 between Mauritania and Senegal

- Law 71-059 of 25 February 1971 on the general organization of civil protection

- Decree No. 80.087 establishing general regulations for civil protection

- Decree No. 2002-17 of 31 March 2002 on emergency relief organization

- Ministry of the Interior, Post and Telecommunications and the Food Security Commission Joint Order No. 430. 2002 establishing the organizational and operating guidelines for regional emergency units

- Ministry of the Interior, Post and Telecommunications, Ministry of Health and Social Affairs, and the Food Security Commission Joint Order No. 0429 of 25 April 2002 establishing emergency severity levels

- Study and implementation of a crisis monitoring, alerts and management system (COVACC), Ministry of the Interior

- Minutes of joint commission meetings between Mauritania and Senegal, Mali and Algeria

- Letter officially designating ports of entry: Bac de Rosso, Nouadhibou PK 55 and Gougui.

- Law No. 042/2000 of 26 July 2000 on plant protection

- Decree establishing the national locust control centre

- Ministry of Rural Development and the Environment/Ministry of Finance/Ministry of Commerce, Artisans, and Tourism Order 1350 establishing a list of ports and border crossings through which the import or transit of plants or plant products is possible.

- Law No. 2000-045 on the national environmental action plan 2012-2016

- 2010 institutional review of the environment sector in Mauritania

- 2006 national sustainable development strategy

- Decree No. 066-2007 of 13 March 2007 establishing the National Sanitation Inspection Office for Fishery and Fish Farming Products and setting forth the organizational and operating rules and regulations for health staff

- Pollumar Plan

- Letter officially designating Nouakchott International Airport as an IHR point of entry
- Decree No. 2007-064 of 12 March 2007 establishing the quality control conditions and adherence to standards for products intended for human and animal consumption
- Order establishing CNOUSP, the ORSEC plan, the national environmental action plan 2012-2016, the national plan for disaster risk reduction, the interministerial emergency commission, COVACC for civil protection, airport procedures, and the IHR (2005)

Guides and reports:

- National Guide for Infection Prevention and Control, 2016
- Infection prevention and control training reports
- Evaluation report on national capacities for risk reduction, preparedness and emergency response in Mauritania, May 2014
- Integrated Disease Surveillance and Response Guide
- National hygiene promotion strategy, 2015
- National Health Development Plan 2012-2020, Ministry of Health
- Report on focal point training for monitoring of IHR, 2015
- INRSP biosafety and biosecurity training report 2015
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