ASSESSMENT

# ECDC Public Health Emergency Preparedness Assessment for Cyprus, 2025

## Under Article 8 of the Regulation (EU) 2022/2371

**ECDC** ASSESSMENT

# Country report: ECDC Public Health Emergency Preparedness Assessment for Cyprus, 2025

Under Article 8 of the Regulation (EU) 2022/2371

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# Abbreviations

| | |
|---|---|
| AAR | After-action review |
| AMR | Antimicrobial resistance |
| AMS | Antimicrobial stewardship |
| AST | antimicrobial susceptibility testing |
| AU | Antimicrobial use |
| CBRN | Chemical, biological, radiological and nuclear (events) |
| CING | Cyprus Institute of Neurology and Genetics |
| DG HERA | Directorate-General for Health Emergency Preparedness and Response Authority |
| DG SANTE | Directorate-General for Health and Food Safety |
| EBS | Event-based surveillance |
| EC | European Commission |
| ECDC | European Centre for Disease Prevention and Control |
| EEA | European Economic Area |
| EOC | Emergency Operations Centre |
| EQA | External quality assessment |
| EU | European Union |
| EWRS | Early Warning and Response System |
| GeSY | Cyprus General Healthcare System |
| HAI | Healthcare Associated Infections |
| HIO | Health Insurance Organization |
| HSC | Health Security Committee |
| IAR | In-action review/Intra-action review |
| ICU | Intensive Care Unit |
| IHR | International Health Regulations |
| IMS | Incident Management System |
| IPC | Infection Prevention and Control |
| JADE | Joint Assessment and Detection of Events |
| KIOS CoE | KIOS Research and Innovation Center of Excellence |
| LIS | Laboratory information system |
| MCM | Medical countermeasures |
| MDRO | Multidrug-resistant organisms |
| MPHS | Medical Public Health Services |
| NAAT | Nucleic acid amplification test |
| NAP | National Action Plan |
| NGH | Nicosia General Hospital |
| NGS | Next Generation Sequencing |
| NFP | National Focal Point |
| N-HEPR | National Health Emergency Preparedness and Response |
| SHSO | State Health Services Organisation [OKYPY in Greek] |
| PHEOC | Public Health Emergency Operations Centre |
| PHEPA | Public Health Emergency Preparedness Assessment |
| PHERP | Public Health Emergency Recovery Plan |
| PoE | Points of Entry |
| PPE | Personal Protective Equipment |
| RCCE | Risk Communication and Community Engagement |
| SCBTH | Serious Cross-Border Threats to Health |
| SimEx | Simulation exercise |
| SOP | Standard Operating Procedure |
| SPAR | State Party Self-Assessment Annual Report |
| STAR | Strategic Toolkit for Assessing Risks |
| TB | Tuberculosis |
| UCPM | Union Civil Protection Mechanism |
| VHF | Viral haemorrhagic fevers |
| WHO | World Health Organization |
| WGS | Whole Genome Sequencing |

# Executive summary

## Introduction

The aim of the Public Health Emergency Preparedness Assessment, as mandated in Article 8 of the Regulation (EU) 2022/2371 on serious cross border threat to health, is to improve prevention, preparedness and response planning in EU/EEA countries through the implementation of recommendations following individual country assessments. As specified in the Regulation, each EU/EEA country will undergo an assessment every three years, with the first cycle of these occurring between 2024 and 2026.

This report presents the findings and recommendations of the first assessment conducted in Cyprus. This involved a desk review of relevant documents, followed by a five-day country visit that took place between 1 and 5 December 2025. As per the assessment methodology, all of the 16 capacities included in Article 7 of the Implementing Regulation (EU) 2023/1808 self-assessment template were assessed, with five of them considered in-depth: Laboratory (Capacity 3); Surveillance (Capacity 4); Health Emergency Management (Capacity 6); Antimicrobial resistance (AMR) and healthcare-associated infections (Capacity 12); and Zoonotic diseases and threats of environmental origin, including those due to the climate (Capacity 10).

## Key findings

The Republic of Cyprus is a unitary state with a centralised health system overseen by the Ministry of Health. The General Healthcare System (GeSY), was launched in 2019 to ensure universal access to healthcare and is administered by the Health Insurance Organization (HIO). Public hospitals and health centres are managed by the State Health Services Organisation (SHSO, OKYPY in Greek). Private healthcare providers continue to play a significant role in service delivery. While their facilities are subject to regular inspections by the Commissioner of Private Hospitals, the Director of Medical and Public Health Services, and the Private Hospitals Inspection Sector of the Ministry of Health, there is room for improvement in the coordination and integration of the public and private sectors.

Public health activities are organised and monitored by the Medical and Public Health Services (MPHS) department of the Ministry of Health, as there is no separate agency for public health. The MPHS Unit for Epidemiological Surveillance and Control of Communicable Diseases leads surveillance, prevention, preparedness and response activities.

National emergency management in Cyprus is coordinated under the ZENON framework, which addresses natural and man-made crises. Within this framework, the Ministry of Health leads the management of health impacts on all plans and is responsible for two of the plans: AMFITRITI, which addresses pandemic preparedness and response, and LITO, which focuses on outbreaks involving high-consequence pathogens.

Cyprus benefits from strong informal networks and close collaboration among key actors, enabling flexible and rapid responses despite its small size. Informal coordination is not always backed by fully developed institutional processes.

The country demonstrates a clear commitment to progress through numerous new initiatives such as the development of national preparedness and recovery plans, and disease-specific operational plans. While this reflects strong ambition and forward momentum, implementation and coordination may prove more challenging, particularly given the limited human resources available.

The main legislation governing control of infectious diseases (Quarantine Law, Cap. 260) is currently under reform, presenting a timely opportunity to reinforce institutional frameworks, clarify roles and responsibilities, and support more sustainable and coordinated implementation going forward.

## Main recommendations for each capacity assessed in depth

### Health emergency management (Capacity 6)

- Ensure that revised operational plans align with the National Health Preparedness and Response (N-HEPR) plan, the National Emergency Management framework (ZENON), and its subordinate plans.
- Ensure multisector collaboration in all phases of planning to ensure ownership and multisector response.
- Ensure that the foreseen Public Health Emergency Operations Centre (PHEOC) and the National Emergency Operations Centre (EOC) have the necessary situational awareness tools for the public health sector (e.g. bed capacity, intensive care unit (ICU) coverage, workforce, cases, deaths, tests performed, etc.)
- Expand the overview of bed capacity to include the private healthcare sector and its participation in responding to a public health crisis.
- Develop a specific methodology to compile the list of critical medical countermeasures (MCMs).
- Explore possible tools and approaches for the monitoring of supply and use existing data to estimate demand for critical MCMs.

- Develop a sustainable management plan for the national strategic stockpiles of MCMs, including laboratory consumables, taking into account the increase in size, and developing Standard Operating Procedures (SOPs) for MCM deployment.
- Initiate discussions on bilateral agreements related to mechanisms to ensure availability of critical MCMs in time of crisis, such as scaled-up manufacturing or capacity reservation.

## Laboratory (Capacity 3)

- Define pathogen-specific responsibilities among reference laboratories and document governance pathways for efficient resource use during health emergencies.
- Establish official agreements for specimen referral nationally and internationally, and facilitate technical support and BSL-4 facilities with international partners.
- Make formal agreements and arrange funding mechanisms for surge laboratory capacities.
- Broaden the capability to conduct genomic characterisation and bioinformatic analysis for a wider range of pathogens.
- Develop biosecurity protocols to complement existing biosafety guidelines to reduce risks associated with high-containment facilities.

## Surveillance (Capacity 4)

- Accelerate the digital transformation of national surveillance systems through full deployment of the Cyprus Innovative Public Health information and communications technology (ICT) System (CIPHIS) platform (replacing paper-based or fragmented reporting practices with interoperable, secure digital solutions), and ensure strong uptake by systematically involving practitioners and other end-users in the design, testing, and continuous improvement of the system.
- Institutionalise the periodic public dissemination of surveillance reports to enhance the visibility of and trust in the surveillance system by issuing reports to key stakeholders and the public at predefined intervals and presenting timely aggregated data and analyses.
- Advance integrated surveillance by linking laboratory and epidemiological data streams, and introducing mandatory, timely reporting obligations for public and private laboratories to enhance completeness, accuracy, and early detection capacities.
- Establish and formalise a national event-based surveillance system, including clear governance, standard operating procedures, and verification workflows, to ensure the timely detection and assessment of signals from non-traditional data sources.

## Antimicrobial resistance and healthcare-associated infections (Capacity 12)

- Launch and publish the National One Health Antimicrobial Resistance (AMR) Action Plan and the National Infection, Prevention and Control (IPC) Action Plan; seek targeted funding and prioritise key actions.
- Gradually roll out BIOCARE for selected healthcare-associated infections (HAIs) and antimicrobial use, leveraging existing data (EARS-Net, ESAC-Net, ECDC PPS) for initial baselines, then define new indicators and targets for HAIs, IPC, and antimicrobial stewardship (AMS).
- Integrate multi-drug resistant organisms (MDRO) screening into the collection of IPC data to reinforce guideline implementation; consider creating a priority MDRO list (e.g. *C. auris*).
- Strengthen AMS, endorsing Hellenic Society for Infectious Diseases guidelines for diagnostics and treatment of infections; combined with antimicrobial consumption (AMC) data from BIOCARE and enhanced community surveillance. This will strengthen future antimicrobial stewardship training and capacity-building.
- Develop IPC specialisation to create career paths for nurses and other professionals; build on current IPC training programmes and ensure continuous education for past cohorts and future specialists.

## Zoonotic diseases and threats of environmental origin, including those due to the climate (Capacity 10)

- Formalise and institutionalise the One Health coordination mechanism, building on the ad hoc committee and defining clear roles and responsibilities.
- Update and harmonise disease-specific action plans for avian influenza and haemorrhagic fevers, and develop a plan for West Nile virus infection, using a One Health approach.
- Continue efforts to raise awareness of vector management and strengthen communication campaigns among healthcare professionals regarding mosquito-borne, zoonotic, and climate-related health risks.
- Maintain efforts to eliminate Aedes aegypti and mitigate Aedes albopictus, allocating the necessary resources for vector control.

## Conclusions

Cyprus has taken significant steps towards strengthening its surveillance and health emergency preparedness and response. To ensure further and sustainable progress, it is essential to prioritise actions based on available resources, reinforce multisectoral collaboration, and formalise coordination mechanisms. As a follow-up to the PHEPA assessment, an action plan will be essential to guide the systematic implementation of recommendations. By building on its strong informal networks, Cyprus can further enhance its capacity to prevent, prepare and respond effectively to future public health challenges. The ongoing revision of the main legislation governing control of infectious diseases presents a timely opportunity to reinforce institutional frameworks, clarify roles and responsibilities, and support more sustainable and coordinated implementation going forward.

# Introduction

The aim of the Public Health Emergency Preparedness Assessments, as mandated in Article 8 of the Regulation (EU) 2022/2371 on serious cross-border threats to health, is to improve prevention, preparedness and response planning in EU/EEA countries through the implementation of recommendations following individual country assessments. As specified in the Regulation, each EU/EEA country will undergo an assessment every three years, with the first cycle of these occurring between 2024 and 2026.

This report presents the findings and recommendations of the first assessment conducted in Cyprus. This process involved a desk review of relevant documents, followed by a five-day country visit.

## Background and legal basis

During the COVID-19 pandemic it was recognised that the legal framework for combatting serious cross-border threats to health, provided for in Decision No 1082/2013/EU, needed to be broadened and enhanced to ensure a more effective response across the European Union (EU) to deal with health-related emergencies. Hence, the European Commission developed and published on 23 November 2022 the Regulation (EU) 2022/2371 on serious cross-border threats to health[1].

Within this Regulation it is recognised that prevention, preparedness and response planning are essential elements for combatting serious cross-border threats to health. In addition to creating a Union prevention, preparedness and response plan (Article 5 of the Regulation), the Regulation also outlined the importance of updating and seeking coherence with Member States' prevention, preparedness and response plans (Article 6 of the Regulation).

To monitor the implementation of the plans, the Member States shall report to the European Commission regarding their prevention, preparedness and response planning at the national level every three years. For this purpose, a self-assessment template was developed under Article 7 of the Regulation[2], complementary to the International Health Regulations (IHR) State Party Self-Assessment Annual Report (SPAR)[3].

In order to support the assessment of these plans, Article 8 of the Regulation indicates that ECDC has the responsibility – in coordination with relevant Union agencies and bodies – to conduct assessments of all 30 European Union and European Economic Area (EU/EEA) countries every three years. The procedures, standards and criteria for the assessments of the state of implementation of national prevention, preparedness and response plans and their relation with the Union prevention, preparedness and response plan are defined by the Commission Delegated Regulation (EU) 2024/1232, adopted in March 2024[4].

ECDC has developed a methodology for Public Health Emergency Preparedness Assessment to implement Article 8 of the Regulation (EU) 2022/2371. The assessment process addresses the 16 capacities included in the Article 7 self-assessment template and is designed to maintain consistency within the EU/EEA countries throughout the three-year cycle, taking into account national respective circumstances.

## Aim and objectives

The aim of the ECDC Public Health Emergency Preparedness Assessment process, drawn from Article 8 of the Regulation on serious cross-border threats to health, is to improve prevention, preparedness and response planning in EU/EEA countries through the implementation of recommendations following individual country assessments. Countries are asked to provide an action plan addressing the proposed recommendations of the assessment within nine months of the receipt of the ECDC report.

[1] European Commission (EC). Regulation (EU) 2022/2371 of the European Parliament and of the Council of 23 November 2022 on serious cross-border threats to health and repealing Decision No 1082/2013/EU. Brussels: EC; 2022. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R2371&from=EN

[2] European Commission (EC). Commission Implementing Regulation (EU) 2023/1808 of 21 September 2023 setting out the template for the provision of information on prevention, preparedness and response planning in relation to serious cross-border threats to health in accordance with Regulation (EU) 2022/2371 of the European Parliament and of the Council. Brussels: EC; 2023. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1808

[3] World Health Organization (WHO). IHR (2005) States Parties self-assessment annual reporting tool, 2nd ed. Geneva: WHO; 2021. Available at: https://www.who.int/publications/i/item/9789240040120

[4] European Commission (EC). Supplementing Regulation (EU) 2022/2371 of the European Parliament and of the Council as regards assessments of the state of implementation of national prevention, preparedness and response plans and their relation with the Union prevention, preparedness and response plan. Brussels: EC; 2024. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401232

The specific objectives of the assessment process are to:

- Collaborate with countries to identify good practice, challenges, bottlenecks, gaps or areas for improvement concerning the 16 capacities referred to in Article 7 (a list of the capacities is available in Annex 1).
- Encourage the inclusion of key elements for prevention, preparedness and response planning such as cross-sectoral and cross-border coordination, crisis management, response governance, communication, plan testing, evaluation and regular reviews, according to the lessons identified from the response to public health emergencies.
- Convene main stakeholders from all relevant administrative levels and sectors.
- Use the opportunity of a standardised approach to contribute to the improvement of EU/EEA prevention, preparedness and response capacities by promoting a common understanding of key elements and a coordinated approach and by creating a community of practice.
- Provide support to countries in enhancing their national prevention, preparedness, and response capacities through recommendations based on the PHEPA, and provide targeted assistance upon request.

# Assessment process

The assessment was conducted by an ECDC-led team, composed of seven ECDC experts and three experts from the European Commission (Directorate-General for Health and Food Safety - DG SANTE) and Directorate-General for Health Emergency Preparedness and Response Authority - DG HERA) and the World Health Organization Regional Office for Europe. The assessment, which was carried out in collaboration with the country focal points and a national public health expert from Liechtenstein, consisted of a desk review phase and a country visit that took place between 1 and 5 December 2025.

As per the established process, the team reviewed Cyprus' responses to the Article 7 self-assessment questions, with five of them considered in depth: Laboratory (Capacity 3); Surveillance (Capacity 4); Health Emergency Management (Capacity 6); Antimicrobial resistance (AMR) and healthcare-associated infections (Capacity 12) and Zoonotic diseases and threats of environmental origin, including those due to the climate (Capacity 10).

The assessment mission was conducted with an open and transparent approach by the host country, which shared relevant documents, engaged in productive discussions and provided clarifications or additional documentation as requested.

Further details regarding the practical aspects of the mission are available in Annex 2.

# Main findings and overarching recommendations

The Republic of Cyprus is a unitary state with a central government and an administrative structure divided into six districts. Local government is organised into municipalities in urban and tourist centres, and communities in rural areas. As of the end of 2023, the population in the government-controlled areas was estimated to be 966 365. All information presented in this report refers to the areas under the effective control of the Republic of Cyprus.

The Ministry of Health is responsible for the overall oversight of the General Healthcare System (GHS), known as Geniko Systima Ygeias (GeSY) in Greek, which was launched in 2019 to ensure universal, comprehensive and equitable access to healthcare services. The Health Insurance Organization (HIO) oversees GeSY's administration and finances, while the SHSO manages, controls, and supervises public hospitals and health centres. The private sector, comprising clinics, hospitals, diagnostic centres and laboratories, continues to play an important role by delivering a range of healthcare services alongside the public system.

The Ministry of Health, through the directorate of Medical and Public Health Services (MPHS), is also the main authority for public health, as there is no separate agency dedicated to public health. The directorate is organised into the following units: Epidemiological Surveillance and Control of Communicable Diseases; School Health Services; Hygiene Services; Private Hospital Inspectors; the Cyprus Authority for Medical Devices and Blood Banks. The State General Laboratory Department of the Ministry of Health is also involved in various public health functions. Public health services are largely delivered through public primary healthcare centres and hospitals, although the private sector also contributes to specific areas. Municipal authorities support public health efforts through food safety inspections, environmental health oversight, pest control, and enforcement of health-related regulations.

The management of national emergencies falls under the ZENON umbrella, a national crisis and emergency master framework covering natural and man-made incidents. The Ministry of Health is responsible for health impact management in all plans and leads two of them: AMFITRITI for pandemic response and LITO for the management of outbreaks involving high-consequence agents.

The MPHS, and specifically the Epidemiological Surveillance and Control of Communicable Diseases Unit, leads surveillance, preparedness and response activities. During the COVID-19 pandemic, the Unit played a central role in case detection, contact tracing, and enforcing isolation measures. Cooperation between MPHS and the SHSO was also very important in the effective management of the COVID-19 pandemic.

In March 2023, Cyprus established a World Health Organization (WHO) Country Office to support public health initiatives, particularly in strengthening preparedness and response to emerging and epidemic infectious diseases, as well as in shaping policies on communicable diseases and zoonoses.

As a small country, Cyprus benefits from strong informal networks, a shared sense of purpose and effective ad hoc coordination among key actors. These characteristics allow for flexibility and rapid response, although they are sometimes accompanied by a lack of fully established institutional processes, which can limit consistency and long-term sustainability. The MPHS also works closely with academia.

Cyprus demonstrates a clear commitment to progress, with numerous new initiatives currently under development. Yet, while this reflects strong ambition and forward momentum, it may also pose challenges in terms of implementation and coordination, particularly given existing capacity constraints. Significant gaps were identified, particularly within the workforce, where staff often perform multiple roles, placing additional strain on human resources. At the same time, private healthcare actors play a significant role in service provision although there is a limited overview of their capacities and service quality.

Collaboration within EU networks and initiatives is generally effective and provides important added value. However, there is scope to further strengthen these efforts, particularly in systematic information-sharing.

The main legislation governing control of infectious diseases (Quarantine Law, Cap. 260) is currently under reform, presenting a timely opportunity to reinforce institutional frameworks, clarify roles and responsibilities, and support more sustainable and coordinated implementation going forward.

## Recommendations

- Ensure that ongoing legislative changes adequately address key **cross-cutting topics** (intersectoral coordination, health emergency management, zoonotic and environmental threats, antimicrobial resistance (AMR), laboratories, research, recovery, Union coordination, International Health Regulations (IHR)).
- **Prioritise**, consolidate and complete ongoing revisions to **preparedness** and **other operational plans:**
  - avoid attempting to implement too many initiatives simultaneously;
  - clarify coordination arrangements (via Standard Operating Procedures (SOPs));
  - establish a cross-sectoral exercise strategy to selectively test new plans. Capture and integrate lessons from exercises and events in national activities.
- Develop a comprehensive, flexible and scalable workforce and training strategy to address workforce gaps in key public health domains (e.g. laboratories, epidemiology and preparedness) that also explores feasible participation pathways in European training and capacity-building initiatives. Consideration should also be given to investing in the ECDC fellowship (EPIET/EUPHEM) as a more sustainable solution in the long-term.
- Strengthen overview of the quality and capacities of the **private sector** (e.g. lab accreditation, bed capacity, workforce, surge capacity).
- Establish a centralised **24/7 function** for public health event alerts, supported by SOPs.

# Findings and recommendations per capacity

A list of the capacities that were included in the assessment is available in Annex 1.

## Capacities assessed in depth

### *Health emergency management (Capacity 6)*

**Management of health emergency response**

Cyprus has an established national framework of emergency management plans (22) under an umbrella plan (ZENON), covering multiple natural disasters and man-made incidents. In all plans, the Ministry of Health is responsible for managing consequences for public health and is the leading ministry in two of the plans: AMFITRITI - for the management of a pandemic and LITO - for the management of an outbreak involving a high-risk biological agent (following the 2001 US Centers for Disease Control and Prevention (CDC) categories of high threat agents). A network of general crisis coordinators in the form of a nominated experienced civil servant in each ministry is responsible for the operation of the plans in an emergency. When one of the plans is activated, the crisis coordinators are notified and convene at the National Emergency Operations Centre (EOC) to manage the crisis. They are also responsible for liaising with the respective ministers and communicating decisions, etc. Communication is handled by the lead ministry or the central government (e.g. the President's office). The plans are developed based on four phases: prevention, preparedness, response and recovery and four respective levels of activation with colour coding: Level 1-Green (normal preparedness), Level 2-Yellow (local incident), Level 3-Red (active incident with public health impact), Level 4-White (recovery and relief). Triggers for escalation need better definition. The decision to escalate the AMFITRITI and LITO plans is initially taken by the Director of MPHS (Level 1 to Level 2), and from then onwards by the Minister of Health.

Emergency management plans and risk profiling should be regularly updated every three years and at present, they are being revised. Furthermore, the existing Civil Defence mechanism is currently being completely restructured.

At the Ministry of Health there work ongoing to update the Quarantine Law, Cap.260 governing the response of health authorities to outbreaks and pandemics, although in its current form it was adequate to cover the implementation of measures for the COVID-19 pandemic. The finalisation of the new legislation depends on parliament debates and processes.

An ambitious preparedness plan (National Health Emergency Preparedness and Response, N-HEPR) is currently being developed by the Directorate of MPHS, with support from the WHO country office, following existing international and European guidelines. The new plan will follow an all-hazard and society-wide approach. The objective is to finalise the plan and have it implemented in the next three years. With regard to the society-wide approach, there are good examples that can be leveraged from the National Committee against HIV.

In preparation for the development of the N-HEPR plan and the PHEPA assessment visit, a multi-hazard risk assessment was undertaken in March 2025, using the Strategic Toolkit for Assessing Risks (STAR) methodology. This involved the participation of 46 experts from 19 ministries, agencies and national services, in collaboration with WHO's Regional Office for Europe. The workshop fostered intersectoral collaboration among the different sectors in Cyprus and provided a concrete list of health hazards, including AMR, heatwaves, avian influenza, Crimean-Congo Haemorrhagic fever, dengue, etc. The STAR priority list is used as a guide to prioritise the updates to the operational plans that already existed under the Ministry of Health. The operational plan for AMR, rated as the top threat, has been updated and awaiting final approval, while the heatwave plan, also rated as a top hazard, is under development in collaboration with academia. All the rest of the existing operational plans addressing specific health threats (avian influenza, pandemic influenza, vector-borne diseases, viral haemorrhagic fevers (VHFs), mpox, tuberculosis (TB), poliomyelitis, and IPC) are also due to be updated in the near future, not only in terms of case management, but also measures and community aspects.

The MPHS does not use any specific risk assessment methodology, however a one-page summary of ECDC and/or WHO risk assessments is usually shared with the relevant stakeholders. Adopting or adapting a short rapid risk assessment methodology will enable more effective risk communication with other stakeholders in the Ministry and in the country.

The N-HEPR plan foresees the creation of a public health Emergency Operations Centre (PHEOC) which will allow for better coordination of health resources and stakeholders in a health crisis. There are also plans to include the establishment of an Incident Management System (IMS), which is currently not in place, although elements of the IMS are already defined. For the PHEOC to fulfil its coordination role, it is important for it to be equipped with the appropriate situation awareness tools in collaboration with SHSO (e.g. bed capacity overview, patient transfers etc.) and surveillance systems (e.g. epidemiological updates, cases reported, overview of testing, etc.)

Public hospitals are also under an obligation to develop their own preparedness plans with their crisis coordinators. The emergency response and crisis management plans of public hospitals cover internal crises, such as fires, earthquakes and floods. For external types of crisis, SHSO follows the Republic of Cyprus crisis plans. SHSO has an established internal mechanism for the supervision of these documents, covering completeness checks, scheduled reviews, testing, and updates. At the Ministry of Health level, a centralised supervision mechanism is being developed that will be formalised through the national HEPR plan and its IMS governance. The private sector provides 55% of bed capacity in Cyprus and during the COVID-19 pandemic, it accepted non-COVID patients and elective surgery patients. However, the Ministry of Health (MPHS) does not have a good overview of the bed and workforce capacity in the private sector, which would limit the overview of the health sector capacities in the event of a crisis. The private hospitals have a system of monitoring bed capacity for their own facilities, and they communicate this information to the Ministry of Health when requested. Improved collaboration with the private health sector is included in the overall recommendations as this issue has come up in the review of more than one capacity.

Cyprus is divided into six administrative districts, headed by a District Officer, under the Ministry of Interior. District Officers participate in the management of local crises in their geographical areas of responsibility, although they are more involved in disasters. Each district also has a limited number of local health personnel, which are involved in public health inspections and other public health activities (e.g. surveillance, investigations, etc). Public health decisions and actions are regulated at national level. If necessary, during a local crisis school and community nurses can assist – for example, with contact tracing or risk communication activities.

Drills and field exercises are regularly organised in hospitals and emergency medical services. Although a national simulation exercise has not been conducted in the last three years, one will be organised after the completion of the N-HEPR plan and the participants requested support from ECDC for this activity. The MPHS recently underwent a simulation exercise on avian influenza, organised by the WHO country office, in preparation for the PHEPA assessment and the Ministry of Health also participated in the annual WHO Regional Office for Europe Joint Assessment and Detection of Events (JADE) exercise (November 2025).

In the event of an intentional release of an agent to cause harm, different stakeholders are involved (police, fire services, State General Laboratory), although the Ministry of Health is still responsible for managing the health effects of the potential release. Different plans under ZENON are available for terrorist and chemical, biological, radiological and nuclear (CBRN) events. The Ministry of Health is currently developing a CBRN plan (see also Capacity area 11, Chemical events).

With regard to public health and social measures, during the COVID-19 pandemic there were focal points in the MPHS who were in contact with other ministries (education, tourism, labour, social welfare) and with contact points in hospitals, and the ambulance service. Measures implemented in other countries (e.g. Greece), discussed at EU level, or included in ECDC risk assessments were proposed to an ad hoc Scientific Advisory Committee comprising representatives from academia and other sectors. Measures were proposed to the Minister, decided in the Council of Ministers and implemented by decrees of the Minister of Health under the existing Quarantine Law. The effectiveness of measures at the time was correlated with epidemiological data. However, no institutionalised mechanism exists for the proposal and decision-making in relation to measures, even though they are mentioned in various crisis management plans. A Scientific Advisory Committee is usually set up on an ad hoc basis, depending on the crisis. The N-HEPR plan under development foresees an established multidisciplinary scientific committee which will propose potential public health and social measures for discussion and decision in the Council of Ministers.

Cross-border agreements with neighbouring countries (Greece, Israel and Italy) are in place for mutual aid and transfer of patients and have been tested in recent crises (e.g. the evacuation of people from the Middle East and humanitarian operations to Gaza). With regard to Greece, the Ministry of Health has signed a memorandum of understanding (MoU) with the National Public Health Organisation (EODY) on collaboration in public health, including training courses at points of entry, the sharing of SOPs and plans, etc. In addition, Cyprus is part of the RescEU mechanism and has both received and provided assistance to other countries – e.g. during wildfires.

**Emergency logistics and supply chain management**

Cyprus has identified critical medical countermeasures (MCMs) for preparedness and response, mainly for the purpose of stockpiling. The list includes MCMs for the threats addressed in the national plans for high-risk biological agents and epidemics/pandemics (vaccines, antivirals, antigen tests, personal protective equipment (PPE), hand disinfectants and a reduced number of medical devices). At present, the list is not included in a legal document, however it is incorporated into the National Stockpiling Framework and managed by the Strategic Stockpile Management Committee. A memorandum of cooperation between the Ministry of Health and SHSO is in place and is expected to be formalised soon.

The list has been developed by the Strategic Stockpile Management Committee for MCMs, which was established in July 2025 as a multidisciplinary group with the purpose of managing the strategic stockpile of medical countermeasures relating to urgent and large-scale health or other emerging threats. The members of the Committee provide relevant expertise and represent related Cypriot entities such as the Ministry of Health (the Epidemiological Surveillance and Control of Communicable Diseases Unit, and the Purchasing and Procurement Directorate).

To date, the Committee has not formalised a methodology for drawing up a list and calculating stockpile needs, but certain criteria have been established for the identification and quantification of the strategic and/or buffer stockpile to deal with different scenarios. There are plans to review and continuously update the list, taking into account the EU Stockpiling and Medical Countermeasures Strategies and ECDC/WHO guidelines. The current list for stockpiling was provided during the assessment.

The current strategic national stockpile is owned by the Ministry of Health. It corresponds to 2–4 weeks' worth of demand and is mainly physical (only some vaccines are stockpiled virtually).

The production of MCMs is very limited in the country, and Cyprus depends heavily on external suppliers (imports) to ensure availability of MCMs. In the event of transport disruptions, apart from the major impact on the supply and distribution of MCMs, the supply chain is highly vulnerable.

Cyprus does not have specific national policies or plans for monitoring supply and estimating demand of critical MCMs. However, there have been informal efforts to gather real supply data from distributors and manufacturers, and there is a well-developed centralised system for monitoring the demand of several MCMs (medicines and consumables) in health institutions.

The national production capacity of MCMs has been mapped. With regard to pharmaceutical products, there are only three manufacturers, mainly focusing on finished products, not raw materials or active pharmaceutical ingredients. The three manufacturing companies are regulated and directly supervised by the Pharmaceutical Services of the Ministry of Health. These companies are currently in consultation with the authorities regarding the potential expansion of their production lines to include intravenous solutions. There is no domestic production of PPE or medical devices.

Cyprus has a number of internal policies for central purchase and procurement; detailing methods used to ensure availability and mitigate supply chain vulnerabilities for critical MCMs. In addition, Cyprus closely follows the work in this area conducted by Commission services and international organisations, particularly HERA, WHO and the Critical Medicines Alliance. However, Cyprus does not currently have any formal arrangements with other countries to ensure continued access to critical MCMs, even if there is a need to scale-up manufacturing of MCMs.

**Recommendations**

- Ensure that revised operational plans align with the N-HEPR, the National Emergency Management framework (ZENON), and its subordinate plans, adopting the same structure and clearly outlining responsibilities.
- Ensure multisectoral collaboration in all phases of planning to ensure ownership and multisector response.
- Ensure that the foreseen PHEOC and the National EOC have the necessary situational awareness tools for the public health sector (e.g. bed capacity, intensive care unit (ICU) coverage, workforce, cases, deaths, tests performed, etc.)
- Expand the overview of bed capacity to include the private healthcare sector and its participation in the response to a public health crisis.
- Develop a specific methodology to compile the list of critical medical countermeasures (MCMs).
- Explore possible tools and approaches for the monitoring of supply and use existing data to estimate demand for critical MCMs.
- Develop a sustainable management plan for the national strategic stockpiles of MCMs, including laboratory consumables, taking into consideration the increase of its current size and developing SOPs for MCM deployment.
- Initiate discussions on bilateral agreements relating to mechanisms to ensure availability of critical MCMs in times of crisis – e.g. scaled-up manufacturing or capacity reservation.

## *Laboratory (Capacity 3)*

Cyprus has a strong tiered laboratory network covering all districts, integrating and collaborating across all levels of service. Private laboratories mostly provide routine haematological testing and regional hospital laboratories provide both routine and advanced diagnostic services. National Reference Laboratories are coordinated by the MPHS (Epidemiological Surveillance and Control of Communicable Diseases Unit). The National Reference Laboratories are located in five separate institutes: the Microbiology Department and Immunology Laboratory at Nicosia General Hospital (NGH); the Virology Department at the Cyprus Institute of Neurology and Genetics (CING); the State General Laboratory and the Veterinary Services Laboratories (a Department of the Ministry of Agriculture, Rural Development and Environment). In addition, Cyprus has university-based research laboratories that collaborate with the Epidemiological Surveillance and Control of Communicable Diseases Unit and National Reference Laboratories, in particular to provide support during health emergencies. There is a need to have an overarching plan for the laboratory work and a legally mandated coordination role for one laboratory/institute.

Cyprus has a defined legal and policy framework regulating the establishment, operation, biosafety and quality assurance of clinical and public health laboratories. These instruments ensure laboratory standards, surveillance capacity and alignment with EU and international health security requirements. The legal framework for the laboratories is based on the IHR (2005), various EU regulations – e.g. Serious Cross-border Threats to Health Regulation (EU) 2022/2371 and Regulation (EU) 2017/746 (IVDR) – and multiple national regulations – e.g. the State General Laboratory Law (Cap. 263), the Registration and Operation of Clinical Laboratories Law (N.132/1988) and the Amendment Law (N.103(I)/2004) and Health and Safety at Work (Biological Agents) Regulations [K.D.P. 144/2004].

Reference laboratories operate under ISO 15189 and 17025 standards, participate in national and international external quality assessments and also organise national quality assessments. Some private clinical laboratories are currently not accredited for microbiological analyses, and this should be one area for improvement, especially as regards antimicrobial susceptibility analyses.

During the COVID-19 pandemic, Cyprus demonstrated one of the EU's largest capacities for testing (>5% of population tested per week) and the possibility for similar rapid expansion of diagnostic capacity exists for new health emergencies. The laboratory preparedness plan should be finalised and stress tested through operational simulation exercises and improved within the next three years. Key elements of the plan should clarify and document the activation triggers and decision pathways, governance and coordination (Ministry of Health, reference laboratories and private sector) as well as operational mechanisms such as sample routing, staffing, equipment deployment and laboratory information system (LIS) interoperability with other ongoing efforts for the implementation of electronic health reporting. It is crucial that laboratory electronic reporting is integrated into the overall surveillance system.

Diagnostic technologies in Cyprus span from molecular diagnostics (RT-PCR, multiplex PCR, film array), to culture-based microbiology and antimicrobial diagnostics. Cyprus uses also serology, environmental, wastewater-based and zoonotic surveillance and has Next Generation Sequencing (NGS)/whole genome sequencing (WGS) capabilities. Cyprus can deploy a new nucleic acid amplification (NAAT) test within 2–4 weeks, however it was pointed out that the island location affects reagent delivery during global outbreaks and it is therefore important for Cyprus to take part in joint actions for procurement of medical equipment (including laboratory consumables). Cyprus should clarify the priority pathogens and define roles and responsibilities of reference laboratories for each pathogen area in order to

use resources more efficiently during a crisis. Cyprus has the capacity to characterise a novel pathogen using NGS at the Virology Department at the Cyprus Institute of Neurology and Genetics (CING), which has also a dedicated bioinformatics group. CING can support the Ministry of Health with the identification of novel pathogens using a metagenomics approach, however, the resources for this work need to be secured and agreed upon. The Microbiology Department and Immunology Laboratory at Nicosia General Hospital (NGH) is in the process of purchasing NGS equipment and will focus on bacterial analysis first, especially antimicrobial resistance and tuberculosis drug-resistance detection and strain characterisation. Bioinformatics capacity at NGH needs to be developed through staff training and assessment of the possibility for hiring further qualified personnel.

All reference laboratories have established operational continuity plans to coordinate and manage the restoration of critical business functions in the event of an interruption or disaster and to minimise the likelihood and impact of such events. The main purpose is to maintain maximum levels of service and to ensure the rapid recovery of the reference laboratories following any disturbances.

Cyprus has access to additional sources of laboratory capacity for diagnostic or pathogen characterisation services and technical support from international laboratories through personal contacts. However, interinstitutional agreements for specimen referral and technical support should be formalised. Cyprus participates actively in multiple European (e.g. EISN, ECOVID-LabNet) and global disease networks (e.g. GISRS) and benefits from European Union Reference Laboratory (EURL) services where applicable. Specimen referral and transport is carried out nationally and internationally on the basis of SOPs, with validated shipping protocols and quality systems across different laboratories and using certified courier services (ADR/IATA) with temperature-controlled shipments. The best courier services for international shipment service agreements should be evaluated and it should be ensured that agreements are in place for times of crisis.

In terms of electronic reporting systems, Cyprus has implemented a laboratory information system (LIS) in public hospitals (SHSO) and real-time reporting was used during COVID-19 (ERLY). However, the system is not currently being used by hospital laboratories. At present, laboratories are not legally mandated to report even notifiable diseases to the Ministry of Health. They only notify clinicians of laboratory results. A national electronic reporting system is under development, and this will strengthen automated data flows from and between the laboratories and link the laboratory data to real-time public health surveillance. This, in turn, will also support the international reporting of laboratory-based results. Roles and responsibilities relating to the uploading of sequence data to publicly accessible databases should be clarified within the laboratory network.

Cyprus has BSL-2 and -3 facilities. BSL-3 capacity is available at NGH, CING and the University of Cyprus. Cyprus should establish formal agreements for BSL-4 access with international partner laboratories. Good laboratory practice manuals and biohazard waste management systems are in place, however, more attention needs to be given to biosecurity.

**Recommendations**

- Define pathogen-specific responsibilities among reference laboratories and document governance pathways for efficient resource use during health emergencies.
- Establish official agreements for specimen referral nationally and internationally, and ensure technical support in relation to BSL-4 facilities with international partners.
- Reach formal agreements and make funding mechanisms available for surge laboratory capacities.
- Broaden the capability for conducting genomic characterisation and bioinformatic analysis to a wider range of pathogens.
- Develop biosecurity protocols to complement existing biosafety guidelines in order to reduce risks associated with high-containment facilities.

## *Surveillance (Capacity 4)*

In Cyprus, surveillance is coordinated by the Ministry of Health, through the MPHS Directorate and, in particular, the Epidemiological Surveillance and Control of Communicable Diseases Unit, which holds overall responsibility for the organisation, analysis, and dissemination of surveillance data. The legal framework guiding surveillance is the 1932 Quarantine Law: Infectious Diseases Law and its amendments, which define the process, definitions, stakeholders and flow of information. At present, the surveillance system includes a passive, mandatory, paper-based system for the surveillance of 70 infectious diseases, in which all clinicians participate.

This system is complemented by primary care sentinel data for acute respiratory infection (ARI) surveillance with weekly reporting of ARI cases from 42 physicians (~6.5% population coverage) and a laboratory-based sentinel system for hospitalised patients due to SARS-CoV-2, respiratory syncytial virus (RSV) and influenza in secondary and tertiary healthcare settings. In primary care, the national network of voluntarily participating general practitioners and paediatricians reports weekly data on ARI cases, supported by a systematic sampling guide ensuring representativeness via systematic selection of samples for laboratory testing of influenza, SARS-CoV-2 and RSV. In hospitals, a sentinel network of public and selected private hospitals conducts surveillance of severe respiratory infection, collecting standardised epidemiological, clinical and laboratory data on hospitalised cases. Together, the two components provide geographically and demographically representative coverage to monitor respiratory infection trends and severity.

Cyprus has made progress in the digitalisation of infectious disease surveillance, particularly in the field of respiratory infections, building on investments made during and after the COVID-19 pandemic. The development and deployment of the CIPHIS platform represent a key step towards modernising surveillance processes, especially within primary-care sentinel surveillance. Through CIPHIS, the 42 participating general practitioners and paediatricians are able to submit weekly ARI data electronically, refer cases for laboratory testing, access near real-time dashboards and give feedback. The system also enables the linkage of epidemiological and laboratory data for sentinel cases, enhancing analytical capacity and situational awareness. During the COVID-19 pandemic, dedicated platforms, such as SNOW and ERLY, enabled rapid case notification, laboratory reporting, and linkage to contact tracing and vaccination data. These systems demonstrated the country's capacity to rapidly establish functional digital surveillance solutions under emergency conditions. However, despite these advances during COVID-19, current surveillance processes remain only partially automated. Data entry for both primary and secondary/tertiary care sentinel systems still relies on manual reporting by clinicians or designated hospital focal points, and automatic extraction of data from electronic health records has not yet been fully implemented.

Therefore, while CIPHIS represents an important step towards modernisation, the transition from paper-based or ad hoc reporting practices is not yet complete and needs to be accelerated as in the current situation it is suspected that there is degree of underreporting.

Laboratory confirmation for influenza, SARS-CoV-2 and RSV is well integrated within the sentinel surveillance system, and laboratory data are routinely used to inform weekly epidemiological analyses and reports. However, laboratory surveillance remains fragmented across multiple information systems, which were developed for different operational purposes during the COVID-19 response. Reporting obligations for laboratories, both private and public, are not yet in place, and the integration of the epidemiological and laboratory data remains a challenge. At present, the laboratories report the results manually to clinicians, who in turn are responsible for notifying the results to the MPHS.

During the COVID-19 pandemic, Cyprus managed to effectively set up agreements with academia to supplement the analysis capabilities of the MPHS. The regular public dissemination of aggregated surveillance outputs could also enhance transparency, trust, and the perceived value of surveillance among healthcare professionals and the general public.

Cyprus has successfully established wastewater surveillance as a complementary surveillance tool, particularly for SARS-CoV-2, and participates in relevant European initiatives. Wastewater data have been used to support situational awareness and trend monitoring, especially during periods of reduced clinical testing. The existence of laboratory capacity and analytical expertise in this area represents a clear asset for the national surveillance system. Nevertheless, wastewater surveillance is not yet fully embedded into the national surveillance framework or linked to decision-making processes, with the exception of activities which took place during the COVID-19 pandemic).

Due to the relatively small size of the country, information on unexpected events is collected both nationally and internationally. Events are currently reported via telephone and email, including a public hotline managed by Hygiene Services that captures signals such as food-borne events, before escalating them to the Epidemiological Surveillance and Control of Communicable Diseases Unit. Although digital Event-Based surveillance (EBS) platforms are not implemented, several EU-funded projects, such as the Cy-ESM, are supporting the development of participatory surveillance, laboratory notification systems, and the digitalisation of human, veterinary, and entomological surveillance, which raises the issue of potential interoperability challenges. EBS sources include hospital IPC committees, blood donor screening, veterinary surveillance, and medical entomology systems monitoring vectors. However, written reporting procedures on verification, investigation, analysis, and dissemination of information are not in place and have not been formalised. Outbreak signals trigger investigations led by the Epidemiological Surveillance and Control of Communicable Diseases Unit, Hygiene Services, School Health Services, hospitals, or other services under the Ministry of Health, depending on the setting and disease.

**Recommendations**

- Accelerate the digital transformation of national surveillance systems through full deployment of the CIPHIS platform, replacing paper-based or fragmented reporting practices with interoperable, secure digital solutions, and ensure strong uptake by systematically involving practitioners and other end-users in the design, testing, and continuous improvement of the system.
- Institutionalise the periodic public dissemination of surveillance reports to enhance the visibility of and trust in the surveillance system by issuing reports to key stakeholders and the public at predefined intervals and presenting timely aggregated data and analyses.
- Advance integrated surveillance by linking laboratory and epidemiological data streams, and introducing mandatory, timely reporting obligations for public and private laboratories to enhance completeness, accuracy, and early detection capacities.
- Establish and formalise a national EBS system, including clear governance, standard operating procedures, and verification workflows, to ensure the timely detection and assessment of signals from non-traditional data sources.

## *Antimicrobial resistance and healthcare-associated infections (Capacity 12)*

Cyprus is working on updating the One Health National Action Plan (NAP) on AMR 2026–2030, which is currently awaiting final approvals. The previous NAP for AMR in Cyprus was published in 2013. Prior to the updated NAP AMR, Cyprus had established an interdisciplinary One Health Antibiotic Committee with multiple stakeholders from relevant ministries, as well as patient and pharmacy representatives. In addition, Cyprus is working on a national IPC action plan, to be finalised separately from the NAP for AMR. Following the publication of these action plans, the Cyprus Ministry of Health should further prioritise the actions described in the plans and secure dedicated funding for the prioritised actions, whenever possible.

Cyprus has established the laboratory at the Nicosia General Hospital as the national reference centre (NRC) for AMR surveillance. While the laboratory has core AMR capabilities, including antimicrobial susceptibility testing, its capacity for advanced methods, such as whole genome sequencing (WGS), remains currently limited. The NRC for AMR surveillance is in the progress of building up relevant WGS capabilities and, following the 2022 ECDC Antimicrobial Resistance and Healthcare-Associated Infections (ARHAI) One Health visit, it acquired Maldi TOF-MS technology. Together, these additional technologies will significantly improve the AMR laboratory capacity of Cyprus, however, gaps in bioinformatics expertise will require further training investment.

Overall, the NRC is responsible for AMR surveillance, contributing data to EARS-Net, and currently covering approximately 82% of the Cypriot population. Nevertheless, as observed during the 2022 ECDC ARHAI One Health visit, there are perceived concerns about the quality of antimicrobial susceptibility testing (AST) in some private laboratories. These potential issues should be further evaluated and, if confirmed, addressed through ISO accreditation in microbiology and by expanding external quality assessment (EQA) schemes.

Cyprus does not have a list of priority multidrug-resistant organisms (MDROs). However, guidelines exist for the prevention and control of selected MDROs, including *Candidozyma auris*. The implementation and monitoring of relevant guidelines for MDROs needs to be strengthened, for example by following up the screening practices in future IPC data collections and possibly establishing a list of priority pathogens, including emerging pathogens such as *C. auris*. The list must include emerging pathogens and antimicrobial resistance combinations and be designed for easy updates to reflect new threats or to remove pathogens that become less of a concern.

Antimicrobial consumption (AMC) surveillance is conducted in Cyprus, with the capability since 2024 to report community and hospital consumption data separately. Electronic prescription systems are in place and actively provide feedback to prescribers. Nevertheless, Cyprus is one of the EU countries with the highest consumption of antimicrobials, especially within the community. This requires further attention, which may be initiated by endorsing the Hellenic Society for Infectious Diseases guidelines for diagnostics and treatment of infections. These guidelines describe appropriate use of antimicrobials in a setting with a similar epidemiological situation for AMR to that in Cyprus. Relevant guidelines to enable prudent antimicrobial use remain essential, together with continued improvements in AMC surveillance within the community, with recently improved methodology. The launch of the BIOCARE surveillance system for healthcare-associated infections (HAIs) and antimicrobial usage in hospitals is foreseen and this should improve hospital-based AMC surveillance. Although overall hospital consumption of antimicrobials in Cyprus is below the EU/EEA average, the use of fluoroquinolones and overall broad-spectrum antimicrobials remains high.

Cyprus lacks a formal HAI surveillance programme. However, the roll-out of the BIOCARE platform marks an important step forward, enabling continuous surveillance of key HAI types and building on previous efforts, such as participation in the 2023–2024 ECDC Point Prevalence Survey. The new surveillance system via BIOCARE will tentatively establish a programme for HAI surveillance, with overall surveillance goals, where the initial objective of the surveillance will be to set up relevant baselines for the indicators and potential future targets. As the roll-out of the system is necessarily gradual, and it may be expected that some hospitals join the system later than others, it is suggested that the early data collected in the system may be compared to existing data from EARS-Net, ESAC-Net and ECDC PPS, providing the first relevant analyses and validation of the newly collected data. Initially, BIOCARE will include HAIs and antimicrobial use – later modules of the software will also cover hand hygiene and hospital IPC-related quality indicators. For the future of the BIOCARE system, it is important to note that the system allows both manual data entry, and automated data import via CSV and API, offering opportunities for integration with laboratory systems to reduce the burden on limited IPC staff and minimise time needed for manual data entry.

Overall, Cyprus has made notable progress in strengthening national and facility-based IPC programmes, including the mandatory establishment of local infection control committees in hospitals, maintaining a well-functioning yearly IPC training for healthcare workers, developing and disseminating the national IPC guidelines, and creating the BIOCARE platform for the reporting of key HAI types and monitor IPC practices. However, until the new NAP IPC is launched, the national IPC programme still lacks a formal structure, dedicated budget, and comprehensive and systematic monitoring of water, sanitation and hygiene (WASH) standards.

Looking ahead, Cyprus should continue enabling and reinforcing the IPC workforce by establishing a relevant specialisation in IPC for nurses and/or other professionals. In addition, Cyprus is in the process of organising infectious disease specialisation courses for physicians. These new training programmes, and the introduction of new career paths for IPC professionals, will possibly lead to a stronger workforce in IPC and antimicrobial stewardship, helping the country to improve its situation with AMR, HAIs and antimicrobial use, and move in a positive direction towards the targets established by the Council of the EU for 2030.

**Recommendations**

- Launch and publish the National One Health AMR Action Plan and the National IPC Action Plan; seek targeted funding and prioritise key actions.
- Gradually roll out BIOCARE for selected HAIs and antimicrobial use, leveraging existing data (EARS-Net, ESAC-Net, ECDC PPS) for initial baselines, then define new indicators and targets for HAIs, IPC, and AMS.
- Integrate MDRO screening into IPC data collection to reinforce guideline implementation; consider creating a priority MDRO list (e.g. *C. auris*).
- Strengthen antimicrobial stewardship, endorsing the Hellenic Society for Infectious Diseases guidelines for diagnostics and treatment of infections; combined with AMC data from BIOCARE and enhanced community surveillance, this will strengthen future antimicrobial stewardship training and capacity-building.
- Develop an IPC specialisation to create career paths for nurses and other professionals; build on current IPC training programmes and ensure continuous education for past cohorts and future specialists.

## *Zoonotic diseases and threats of environmental origin, including those due to the climate (Capacity 10)*

Cyprus has initiated the implementation of a multi-sectoral, One Health approach to address zoonotic diseases and environmental threats, including those exacerbated by climate change. The Ministry of Health, through its Epidemiological Surveillance and Control of Infectious Diseases Unit, is responsible for the surveillance, detection, and rapid response to notifiable infectious diseases and outbreaks. This unit also leads the identification of emerging threats and coordinates targeted interventions. The Hygiene Services of the MPHS, which include the Medical Entomology Laboratory (fully operational since 2023), focus on the surveillance, monitoring, and control of invasive mosquito species such as *Aedes aegypti* and *Aedes albopictus*, and the response to foodborne outbreaks. The Ministry of Agriculture, Rural Development and Environment includes the Department of Veterinary Services and the Department of Environment. The Department for Veterinary Services is responsible for monitoring animal health and conducting entomological surveillance of vectors relevant to animal health. The Department of Environment acts as the regulatory authority for environmental impacts, climate-related risks, and adaptation measures. Academic institutions, including the University of Cyprus and the Cyprus Institute, provide scientific and technical support, strengthening evidence-based decision-making.

Cyprus benefits from strong informal networks and effective ad hoc coordination, enabling rapid responses to incidents such as imported cases of dengue fever.

Coordination between the human, animal, and environmental sectors currently takes place via an intersectoral One Health ad hoc committee led by the Ministry of Health, with participation from governmental experts in human health, veterinary medicine, environmental science, and experts from academia. This committee was established approximately six months ago and meets on a monthly basis to enhance collaboration, build trust, improve communication, and develop joint strategies. In times of crisis, specialised, technical committees may be convened to address specific threats.

However, collaboration through this ad hoc committee is not yet formalised or institutionalised. The development of joint objectives and the definition of clear roles and responsibilities will be necessary to ensure the committee functions efficiently. Furthermore, stakeholders relevant for preparedness and response, those overseeing occupational health, have not yet been incorporated into the current framework. A WHO-led workshop planned for the first half of 2026 will support Cyprus in identifying relevant actors and suitable governance structures.

Cyprus is implementing the EU4Health co-funded Cy-ESM programme (2025–2029), which aims to create an integrated digital surveillance system linking human (including arthropod vectors) and animal health data. This initiative will modernise epidemiological surveillance and strengthen preparedness for emerging threats. Nevertheless, data systems across sectors remain fragmented, hindering timely information exchange and integrated analysis. In the long run, an automatic alert system for relevant stakeholders should be included in the platform.

Beyond its generic emergency plans, Cyprus has disease-specific action plans for *Aedes*-borne diseases (i.e. dengue, chikungunya virus disease, Zika virus disease, yellow fever), avian influenza, Ebola virus disease, Marburg virus disease and foodborne infections. The mosquito management plan focuses on eradicating *Aedes aegypti* and suppressing *Aedes albopictus* populations, two invasive mosquito species that were first detected in Cyprus in 2022. Disease-specific action plans vary in structure and detail; harmonisation across diseases and the adoption of a One Health approach would be beneficial. The ad hoc One Health committee is an appropriate forum to develop and update these plans, ensuring involvement from all sectors. The plans should include clear criteria and

mechanisms for reporting events internationally (i.e. Early Warning and Response System/International Health Regulations, European surveillance portal for infectious diseases, Rapid Alert for Food and Feed, and Animal Disease Information System) and for responding to events reported by other countries via these platforms. Some plans, such as the avian influenza plan (last updated August 2006), require updating to reflect current realities, given recent ECDC guidance. West Nile virus emerged in Cyprus in 2016, with the first report of a human case in the country. However, no cross-sectoral action plan exists for human and animal cases. The existing Ebola virus disease and Marburg virus disease response plan should be broadened to encompass other haemorrhagic fevers, including Nipah virus infection and Crimean-Congo haemorrhagic fever. This expanded plan must incorporate provisions for laboratory diagnostics, case management, and contact tracing. Given Cyprus' current limitations with in-country laboratory testing and case management for imported cases of haemorrhagic fever, it is essential to establish formal agreements with other countries to ensure access to necessary support and expertise. The recently established European Union Reference Laboratory for Public Health on Emerging, Rodent-borne, and Zoonotic Viral Pathogens could provide support with the laboratory confirmation of suspected cases and support capacity building in the country. The action plans on *Aedes*-borne diseases and on the management of invasive mosquito species, developed/updated in 2025, are comprehensive and address the threat posed by the establishment of *Aedes albopictus* and *Aedes aegypti*.

The Ministry of Health actively informs the public about mosquito management through campaigns in schools, door-to-door outreach in affected areas, and regular media appearances. Cyprus has not (yet) experienced local outbreaks of *Aedes*-borne diseases, but the establishment of vectors presents a future risk. Although awareness-raising activities are ongoing in primary care clinics and among doctors and laboratory specialists, further work is required in this area to ensure the early diagnostics of imported cases and potentially locally-acquired cases – which is key to ensuring early warning and rapid action. Plans to include vector-borne diseases in the medical curriculum will further contribute to awareness.

The Medical Entomology Laboratory provides robust entomological surveillance, and integrated management of invasive mosquitoes, using biocidal products (larvicides, adulticides) and communication campaigns, and also leading a pilot initiative relying on Sterile Insect Technique for mosquito control.

As an island, Cyprus is particularly vulnerable to the impact of climate change. The National Strategy for Adaptation to Climate Change (2025–2050) acknowledges the challenges posed by climate change and includes provisions for health impacts, such as response to heat waves and floods, including some projections based on modelling. However, the operational integration with infectious diseases preparedness plans remains limited. The Department of Environment led the development of this strategy, with the Ministry of Health contributing the health impact section. The Cyprus Institute supports climate change and health work, complementing limited governmental resources.

**Recommendations**

- Formalise and institutionalise the One Health coordination mechanism, building on the ad hoc committee and defining clear roles and responsibilities.
- Update and harmonise disease-specific action plans for avian influenza and haemorrhagic fevers, and develop a plan for West Nile virus infection, using a One Health approach.
- Continue efforts to raise awareness on vector management and strengthen communication campaigns among healthcare professionals regarding mosquito-borne, zoonotic, and climate-related health risks.
- Maintain efforts to eliminate *Aedes aegypti* and mitigate *Aedes albopictus*, allocating necessary resources for vector control.

## Other capacities not assessed in-depth

### *Policy, legal and normative instruments to implement the International Health Regulations 2005 (Capacity 1)*

The Ministry of Health's Directorate of MPHS serves as the National Focal Point (NFP) for IHR, performing the core functions required. While the designation of the NFP is clear, the overall national capacity for IHR coordination is still only partially developed, with several limitations affecting multisectoral cooperation, governance, and the ability to ensure round-the-clock functionality.

In a relatively small country like Cyprus, coordination tends to be easier due to close institutional relationships and streamlined governance structures. However, the absence of a comprehensive legal framework limits the ability to strengthen the authority of the IHR Focal Point and to mandate the development of SOPs that are currently lacking.

Multisectoral coordination is still largely dependent on ad hoc arrangements; engagement with critical infrastructure sectors, such as transport, energy, and telecommunications, is not fully institutionalised.

Legal mapping and gap analysis are being undertaken, supported by EU initiatives, but systematic review cycles and integration of lessons learned into legislation are still pending. The NFP operates effectively but lacks formal terms of reference and structured communication protocols across ministries. Communication channels between the NFP and other authorities are not governed by approved protocols defining roles, responsibilities, escalation

steps, or deadlines for reporting. Plans to develop an incident management system and a digital platform for real-time information exchange are promising steps toward improving interoperability and accountability.

Furthermore, the capacity for 24/7, 365-day IHR operations is not yet fully established. While key officers respond outside of working hours on an informal basis, Cyprus does not currently operate a fully functional duty-officer roster.

**Recommendations**

- Enhance advocacy and resource allocation to guarantee that IHR functions are fully empowered and supported. This includes securing sufficient human and financial resources to maintain continuous operational capacity, with a 24/7 duty system in place throughout the year.
- Reinforce the authority of the National IHR Focal Point and formalise cross-sectoral collaboration. This framework should enable the development and implementation of SOPs that are currently absent, ensuring clarity and accountability across all levels.

## *Financing (Capacity 2)*

The Ministry of Health is financed through the annual budget cycle submitted to the Ministry of Finance using standard templates. This includes the financing of the activities of the MPHS.

During public health emergencies, an *ad hoc* committee is formed under the Ministry of Health and chaired by the Permanent Secretary to assess needs and prepare cost estimates using the standard budgetary templates. Financial management for these emergencies is coordinated with the Ministry of Finance, which may allocate funds from the State Budget under Article 57 'Unforeseen Expenditures & Reserve', as described in the Fiscal Responsibility & Budgetary Framework Law N.20(I)/2014), providing funds for urgent needs, including public health emergencies. If these reserves are insufficient, a supplementary budget mechanism can be activated, requiring a request from the Ministry of Health and it must be then approved by the Council of Ministers and subsequently by the Parliament. This framework is robust and flexible, enabling rapid fund reallocation and effective coordination, as demonstrated during the COVID-19 pandemic and the wildfires of 2025, when resources were released within 24-48 hours. In addition, during emergencies, procurement procedures are facilitated and accelerated under the Public Procurement Law (73(I)/2016).

Cyprus does not have a dedicated budget line for IHR implementation or preparedness activities. Instead, funding is allocated indirectly, mainly through the Ministry of Health annual budget. There is no specific national mechanism for IHR financing coordination, nor are there real-time monitoring tools for IHR expenditure. External funding through EU-funded projects and grants (e.g. Recovery and Resilience Plan, EU4Health, etc) also plays a significant role in covering costs related to surveillance, preparedness and recovery.

There is no systematic testing of contingency funding for public health emergencies, although plans are in place to implement this within the next three years.

There is no permanent joint task force between the Ministry of Health and the Ministry of Finance, and there are no SOPs for emergency funding. Coordination relies on established procedures and ad hoc committees to manage emergency funding.

**Recommendations**

- Create a dedicated budget line for IHR implementation within the Ministry of Health budget.
- Allocate financial resources to cover the role of an IHR 24/7 officer/duty system.

## *Human resources (Capacity 5)*

Cyprus is currently mapping the healthcare workforce and needs to finalise this to plan human resources for health crisis management in the future. While mechanisms for mobilising human resources exist for various health services, plans have not been tested or routinely updated.

The availability and accessibility of quality health workforce, surge capacity in emergencies, including the healthcare workforce for surveillance (e.g. field investigation and contact tracing teams) is critical to build the resilience of communities and for the continuity of health services. According to the WHO Global Strategy on Human Resources for Health, the recommended density of doctors, nurses and midwives per 1 000 population for operational routine services is 4.45, plus 30% surge capacity.

The Quarantine Law (Cap. 260) of Cyprus, originally enacted in 1932 and upheld under Article 188(1) of the Constitution, is the current legal framework for government action during public health emergencies, such as outbreaks and pandemics. The implementation of the Quarantine Law (Cap. 260) and related legal instruments during the COVID-19 pandemic underscored both the strengths and limitations of Cyprus' public health legal framework. While the use of delegated powers facilitated rapid and effective response measures, reliance on older legal provisions revealed significant structural and procedural gaps. The integration of explicit human-resource provisions within a modernised legislative framework will enhance national preparedness and ensure effective, lawful, and sustainable management of future pandemics, or other major public health threats.

The ability to mobilise and finance substantial human resources rapidly through legal and transparent procedures is necessary in order to safeguard the continuity of the public health response.

According to Cyprus 2024 States-Parties Self-Assessment Annual Report (SPAR) results, appropriate human resources are available in all relevant sectors at national and intermediate levels to detect, assess, notify, report and respond to events according to IHR provisions. This includes nurses and midwives, physicians, public health and environmental specialists, social scientists, communication, occupational health, laboratory scientists/technicians, biostatisticians, information technology (IT) specialists, biomedical technicians, epidemiologist, animal health specialists, entomologists and others. According to IHR provisions, this workforce is required to detect, assess, notify, report and respond to events. The response element can be summarised as the capacity to respond promptly and effectively to public health risks and public health emergencies of international concern. However, a notable cross-cutting theme of this assessment is that several capacity areas are managed by very few staff members and therefore the health system is vulnerable, especially in times of crisis. It is therefore especially important for Cyprus to create reserve pools of trained personnel and accelerate their training for crisis situations. In addition, expertise needs to be established and/or further reinforced in epidemiology, WGS and bioinformatics.

In times of crisis, the Ministry of Health has the capacity (as shown during the COVID-19 pandemic) to manage and coordinate human resources at national and intermediate levels, including the mobilisation of required human resources when needed.

Efforts to maintain and update a national registry of healthcare workforce were intensified during the COVID-19 pandemic.

**Recommendations**

- Finalise the mapping of the health care workforce, including the private sector and implement strategies for staff deployment in health emergencies.
- Create reserve pools of trained personnel and accelerate their training for crisis situations.

## *Health service provision (Capacity 7)*

Cyprus introduced the GeSY in 2019, providing universal coverage through public and private service providers. Private hospitals deliver over half of the hospital activity within the GeSY, and the private sector also provides services outside of GeSy. At present, public (SHSO) and some larger private hospitals have an integrated hospital information system, which supports monitoring of beds, intensive care units (ICU) and staffing capacity. During COVID-19, healthcare capacity across both public and private sectors was actively monitored and managed by the Cyprus Ministry of Health. Continuous mapping and monitoring of hospital beds, ICU and staffing capacity, including the private sector capacities, will help the Ministry of Health maintain situational awareness in emergencies. The Ministry of Health and the HIO are central to the governance and contracting of the private hospitals, which may facilitate the monitoring of private hospital capacity.

The N-HEPR plan is being developed for business continuity. At present, SHSO has an emergency response and crisis management policy, and SHSO hospitals and the ambulance service have alert and response plans. These service providers run regular emergency exercises.

**Recommendation**

- Integrate healthcare capacity monitoring data and surge capacity strategies into the updated N-HEPR plan.

## *Risk communication and community engagement (Capacity 8)*

The coordination team provided samples of communication campaigns organised by the Ministry of Health, in close collaboration with the Press Information Office in Cyprus, as well as their vision for a risk communication plan following existing WHO and ECDC guidelines. Communication campaigns are planned ahead of time for the whole year with the staff responsible for the surveillance of a particular disease (e.g. for World AIDS Day, European Antibiotics Awareness Day (EAAD), etc.) Communication usually involves traditional media, national radio and TV time, for small advertisement spots and posters on buses, billboards, etc. Use of social media is already being considered for communication concerning vector-borne diseases as a more effective means of dissemination.

Staff in the MPHS are also frequently called to speak to the media during outbreaks or other events, and they would benefit from media training and should take advantage of potential courses organised at EU level or organise a dedicated activity, leveraging experience from academia or the private communication sector in Cyprus.

The MPHS does not have a website and surveillance reports are not made public, and are only disseminated to a limited number of ministry stakeholders. This is the result of a political decision. In addition, communication addressed to the public has to be approved by the Minister, and at central government level. An MPHS website is under development and expected to be functional in the near future. The website should be designed to facilitate the communication of surveillance data to healthcare professionals and the public. Increased transparency on disease data would help to build further trust in the system.

Communication with health professionals is conducted through their professional associations, and at conferences and meetings.

Communication material is sometimes translated into other languages (e.g. English, Turkish, etc.) and attempts have been made to identify community leaders to assist with reaching out to communities (e.g. religious leaders). Good practices on involving affected communities and patient representatives were described during the meeting in the context of activities concerning HIV and viral hepatitis.

The foreseen communication plan could be an independent document, or a section in the N-HEPR plan in order to save resources, although having a separate Risk communications and community engagement (RCCE) plan can provide more context and enhance the importance of this area for all stakeholders.

**Recommendations**

- Remove barriers to rapid communication to the public during emergencies (i.e. agree on a process for rapid approvals for communication material and adopt the use of contemporary tools, such as social media).
- Strengthen community engagement work making use of good practices (e.g. from HIV and viral hepatitis).

## *Points of Entry (PoE) and border health (Capacity 9)*

Cyprus has designated two international airports (Larnaca and Paphos) and two ports (Limassol and Larnaca) under IHR (2005). Larnaca port mainly handles cargo. In 2024, the airports received over 5.8 million passengers — 69% through Larnaca. The United Kingdom was the leading country of origin (1.5 million travellers, 26%), while 52% of arrivals came from the EU/EEA.

The Ministry of Health (specifically through the MPHS) serves as the lead authority for public health matters at PoEs. It collaborates closely with the Cyprus Port Authority, Civil Aviation Department, Customs, Immigration, and other relevant agencies to ensure effective coordination and implementation of health measures at PoEs.

While the roles and responsibilities of different stakeholders are described, information sharing among national stakeholders and international partners is often fragmented, largely informal, and reactive rather than proactive. This can lead to delays in decision-making and response during emergencies, particularly for events requiring rapid containment measures

Both airports currently have comprehensive public health emergency contingency plans, which were updated in 2025. The contingency plan for Limassol port is under development and is expected to be finalised in the first quarter of 2026. The Larnaca port plan will be prepared soon afterwards. All plans are multisectoral and follow an all-hazards approach, covering communicable diseases, hazardous materials, fires, natural disasters and security threats.

In addition, a new overarching public health emergency contingency plan will be developed to encompass and standardise the four individual plans. It has been noted that current airport contingency plans do not address vector surveillance and control and that terms of reference defining roles and responsibilities of each actor are missing. These gaps will therefore be addressed during the development of the overarching plan.

At present, the contingency plans have not been formally tested, and there are no provisions for regular testing. However, lessons learned from previous public health events, incidents, and emergencies have been incorporated into plan updates.

Health-related travel recommendations are issued by the Ministry of Health, in agreement with other ministries. When required, an ad hoc scientific expert committee may be convened to provide technical advice to the Ministry of Health on matters such as screening and quarantine.

**Recommendation**

- Strengthen coordination mechanisms between PoEs and national authorities, as well as with international partners, to ensure rapid information sharing and joint response to cross-border health threats.

## *Chemical events (Capacity 11)*

The Cypriot emergency management framework includes several plans addressing incidents involving chemical substances and disasters such as chemical spills, maritime contamination and terrorist attacks. Ministry of Health participation in all these plans is currently under revision and, in addition, Cyprus' civil defence system is being transformed into a civil protection service, therefore, the plans will also be revised from this perspective.

Response to chemical events in Cyprus involves multiple stakeholders including the Civil Defence, the Fire Department, police and emergency medical services in the field response, the Ministry of Health and the Labour Inspection Department for chemical events involving facilities under the Seveso II EU directive (Dir 96/82/EEC). These facilities are registered and supervised closely, and also geographically segregated in the area of Vasilikos. Testing for chemical substances is undertaken by the State General Laboratory, which receives samples taken from the field by the Labour Inspection Department and has capacity for the identification of chemical substances. However, testing of environmental samples (e.g. powder incidents) for biological agents is not possible in the

country and transportation of samples is considered to be a significant challenge. No relevant MoU is in place to cover this contingency, something which should be considered in the framework of wider laboratory collaboration (see also recommendations in Laboratory Capacity 3).

Fire department and police staff have received training on international courses for the response to chemical incidents and terrorist events. Management of the incident is organised along the first responder triad of fire department (control of fire or chemical spill), police (site control) and emergency medical services (first aid, stabilisation and transfer of patients). Limited capacity exists for field testing with handheld equipment and decontamination is organised and performed by the fire department. Plans describe decontamination outside of hospitals, which do not have such capacities (i.e. at the site of the incident). Taking advantage of international training in the area of CBRN or in the form of international drills and exercises is a good practice for keeping expertise in the country and should continue.

Cyprus does not host a poison centre; there is an on-line resource (TOXBASE) available to clinicians working in accident and emergency departments, however its use and availability has not been evaluated.

The Ministry of Health is developing a CBRN plan, which was shared with the assessment team in draft form. The response part of the final CBRN plan should fit with the other emergency management plans aiming to provide an agreed SOP for the response to potential events, while the case management information for high risk pathogens, chemical substances and radiation (medical treatment options, etc.) would be more useful as a handbook for emergency medical services and clinicians on the front line. Following the completion of this plan, a national field simulation exercise should be planned in the testing cycle for all completed plans (see also Overall Recommendations).

**Recommendations**

- Finalise the CBRN plan, ensuring its complementarity with the emergency management structure and the participation of all stakeholders. The final plan and its implementation should account for the proper handling, transport and testing of samples.
  Establish a MoU with an operational poison information centre in another EU Member State for provision of services.

## *Union level coordination and support functions (Capacity 13)*

The EU Regulation on Serious Cross-Border Threats to Health is directly applicable in Cyprus. There are routine and regular interactions between Cyprus and the EU, such as participation in the Health Security Committee and through established ECDC national focal points within the country. The Health Security Committee representative for Cyprus is the Director of MPHS, which ensures that they are part of national emergency response mechanisms and able to effectively facilitate information exchange. In general, however, coordination between the EU and the national authorities in Cyprus is based more upon established practices than formalised processes or SOPs.

Cyprus regularly draws upon relevant EU information and tools, such as EWRS, EpiPulse, the ECDC Communicable Disease Threat Reports (CDTR), and the Rapid Alert System for Food and Feed (RASFF). Information from the Commission, Health Security Committee and ECDC has been used to inform a wide range of activities (such as digital vaccination certificates, wastewater surveillance, or the control of dengue) or to inform national preparedness and response guidelines. Beyond the health sector, Cyprus has also used the Union Civil Protection Mechanism (UCPM) – e.g. in 2025 to request firefighting assistance.

Timely information exchange through the country on proposed EU risk assessments and risk mitigation approaches could be more structured and formalised. Similarly, information exchange from the national to the EU level (e.g. EpiPulse) could be enhanced. The development of a PHEOC is currently under discussion, which represents an opportunity to strengthen the interoperability of the national incident management system with the EWRS.

**Recommendations**

- Develop standardised processes to enhance the efficiency of information transmission from the EU level to all relevant national sectors, including for situations requiring a One Health approach
- Increase the frequency of information sharing through EU platforms (e.g. EpiPulse, EWRS) clarifying triggers for notification via staff training and awareness to facilitate early warning at EU level.

## *Research development and evaluations to inform and accelerate emergency preparedness (Capacity 14)*

In Cyprus, the process of approving and conducting scientific research in the field of health is governed by an institutional framework that involves numerous organisations, including the Cyprus National Bioethics Commission (CNAC), the Ministry of Health, the Commissioner for Personal Data Protection, the research and innovation committees of various organisations such as the SHSO, and other public or academic institutions. Efforts are underway to regulate the secondary use of health data so as to facilitate epidemiological research and this is expected to be implemented by 2027.

A combination of formal processes and informal collaboration links research and decision-making communities, enabling the Ministry of Health to mobilise expertise during emergencies.

Cyprus governmental agencies and universities are actively involved in public health research. During the COVID-19 pandemic, research advisory committees contributed to several areas of research, including wastewater surveillance and the behavioural sciences, to support decision-making. Cyprus contributes to a wide range of nationally-funded and EU-funded projects and initiatives (e.g. via Horizon Europe, EU4Health, the European Health and Digital Executive Agency (HADEA), HERA, the Recovery and Resilience Facility (RRF), the European Social Fund (ESF)), which include the Cyprus Empowered Surveillance Mechanism (CY-ESM), the EU-Wastewater Integrated Surveillance for Public Health (EU-WISH), European Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections (EU-JAMRAI), the Joint Action on Comprehensive and Sustainable Strategic Stockpiles of Medical Countermeasures used in Crisis (JA STOCKPILE), ECDC Respiratory Diseases Forecasting Hub (RespiCast) and CYP5021 which is focused on the control of *Aedes* spp. mosquitoes. Through engagement in these EU projects, Cyprus promotes the use of harmonised study protocols and data standards. This also includes engagement in EU and international clinical trial networks, including VACCELERATE and the Research in Europe and diversity inclusion (READI) project, but the country does not conduct patient enrolment for studies focusing on infectious disease. Participation in the ACT-EU initiative (Accelerating Clinical Trials in the EU) has led to some national discussion about fast-track clinical trial mechanisms, but the relatively small population size means that linking to larger, European clinical trial networks will continue to be important. Cyprus has prepared a draft plan on use of research before, during and after emergencies which details how more streamlined procedures would be adopted in the event of emergencies, however it does not yet include the identification of leading actors in such instances.

There are currently no predesigned outbreak research protocols or dedicated mechanisms to activate research during outbreaks. Such protocols would be helpful for rapid research in both clinical and community settings. In terms of infectious disease, these might include case-control studies, first few X cases and contact investigations and seroprevalence studies. Some work is underway to develop basic research protocols and to streamline elements such as ethical review and data-sharing. The role of research in public health emergency preparedness and response is expected to be addressed in the upcoming Public Health Emergency Preparedness and Response Plan (PPR Plan) through an internal draft operational guidance document that will outline roles and responsibilities, priority-setting processes and mechanisms for communicating research needs. This guidance would also discuss the types of research to be conducted, areas where research and innovation could benefit preparedness, the matching of institutions to research priorities, and the dissemination of results.

**Recommendations**

- Convert the draft operational guidance on use of research before, during and after emergencies into a full chapter in the upcoming N-HEPR plan, outlining roles, responsibilities, and processes.
- Identify and develop off-the-shelf operational research protocols that could be deployed to support evidence-based decision-making during public health emergencies.

## *Recovery elements (Capacity 15)*

Cyprus has reported that its existing national emergency response plans (e.g. ZENON, LITO, AMFITRITI) contain references to recovery elements, although these plans were not provided for review. In collaboration with the WHO country office, Cyprus has drafted both a N-HEPR plan and a Public Health Emergency Recovery Plan (PHERP). The N-HEPR plan includes a dedicated recovery section, including after-action reviews (AARs), and emphasises that recovery must be integrated into the response. The PHERP outlines how recovery will occur, describing a structured, stepwise process led by the Ministry of Health and supported by multiple sectors. The plan also emphasises the early integration of recovery into the IMS during the response phase. The N-HEPR is currently under stakeholder consultation, with the PHERP expected to follow; implementation of the PHERP is anticipated in late 2026 or early 2027.

Templates for both AARs and IARs have recently been developed, drawing on ECDC and WHO methodologies, and these will be added as annexes to the PHERP.

The MPHS has not yet completed any AARs/IARs using a structured methodology. However, they have reflected internally on lessons learned from the COVID-19 pandemic and taken recovery actions to improve surveillance. Other initiatives to reflect on the COVID-19 response included the joint peer review conducted by the Ministry of Health and the Social Welfare Services, focusing on health monitoring within care facilities.

**Recommendation**

- Strengthen the country's capacity to carry out AARs/IARs and convert the lessons learned from emergencies and outbreaks into actions/revised procedures.

### *Actions taken to improve gaps found in the implementation of prevention, preparedness, and response plans (Capacity 16)*

Simulation exercises (SimEx) are regularly conducted by the SHSO, ambulance services and first responders, with the involvement of the Ministry of Health. The MPHS takes part in the annual WHO Regional Office for Europe JADE exercise and recently participated in a SimEx on avian influenza, organised by the WHO country office at the request of the MPHS. Although the MPHS has not organised its own SimEx due to limited capacity, there is a growing interest in developing this area. As mentioned above, no formal After Action Reviews (AARs) have been conducted by MPHS, however, since the COVID-19 pandemic, internal discussions have led to recovery actions to improve surveillance.

There is currently no systematic approach for capturing challenges and lessons learned from exercises, reviews, or AARs, or to monitor actions taken to address identified gaps. Although there is no National Action Plan for Health Security at present, Cyprus intends to develop one following the PHEPA.

**Recommendation**

- Develop an action plan that combines and prioritises all PHEPA recommendations — using the National Action Plan for Health Security (NAPHS) or a similar tool — clearly assigning responsibilities, timelines, resource needs, and the source of each recommendation, and closely monitor implementation.

# Conclusions

The ongoing revision of the Quarantine Law (Cap. 260) offers an important opportunity to address key cross-cutting issues, such as intersectoral coordination, health emergency management, zoonotic and environmental threats, AMR, laboratory capacity, research, recovery, EU coordination and IHR. Although strong informal networks function effectively during emergencies, it is essential to clarify and formalise coordination mechanisms. Building long-term resilience requires investment in a flexible and skilled workforce, strengthened oversight of private-sector capabilities crucial for surge response, and the establishment of 24/7 public health functions.

The numerous ongoing initiatives, including the development and revision of plans, demonstrate a forward momentum. However, it is crucial to avoid simultaneous implementation and instead prioritise actions for maximum impact. New plans should be tested, guided by a comprehensive cross-sectoral exercise strategy. Developing an action plan following the PHEPA assessment will be vital to ensure effective implementation of recommendations. By systematically learning from both exercises and real events and building on EU coordination, Cyprus can strengthen its preparedness and response to future public health threats.

# Annex 1. List of capacities included in the assessment

**Table 1A. List of capacities included in the assessment**

| Capacity no. | Capacity name |
|---|---|
| Capacity 1. | International Health Regulation (IHR) implementation and coordination |
| Capacity 2. | Financing |
| Capacity 3. | Laboratory |
| Capacity 4. | Surveillance |
| Capacity 5. | Human resources |
| Capacity 6. | Health emergency management |
| Capacity 7. | Health service provision |
| Capacity 8. | Risk communications and community engagement (RCCE) |
| Capacity 9. | Points of Entry (PoEs) and border health |
| Capacity 10. | Zoonotic diseases and threats of environmental origin, including those due to the climate |
| Capacity 11. | Chemical events |
| Capacity 12. | Antimicrobial resistance (AMR) and healthcare-associated infections |
| Capacity 13. | Union level coordination and support functions |
| Capacity 14. | Research development and evaluations to inform and accelerate emergency preparedness |
| Capacity 15. | Recovery elements |
| Capacity 16. | Actions taken to improve gaps found in the implementation of prevention, preparedness and response plans |

# Annex 2. Practical arrangements for the assessment process

## Assessment team

The experts involved in this assessment are detailed in Table 2A.

**Table 2A. Members of the assessment team**

| Members of the assessment team | | | |
|---|---|---|---|
| **Name** | **Institution** | **Role in the team** | **Capacities assessed** |
| Jonathan Suk | ECDC | Team lead | 13, 14, 15, 16 |
| Tommi Karki | ECDC | Expert | 4, 7, 12 |
| Eeva Broberg | ECDC | Expert | 3, 5, 14 |
| Leonidas Alexakis | ECDC | Expert | 1, 4, 11 |
| Agoritsa Baka | ECDC | Expert | 2, 6, 8, 11 |
| Celine Gossner | ECDC | Expert | 7, 9, 10 |
| Despina Pampaka | ECDC | Expert | 2, 6, 15, 16 |
| Maria del Carmen Sanz Urdin | DG HERA | Expert | 6b |
| Laura Gillini | DG SANTE | Expert | 10, 13, 14 |
| Ana Paula Coutinho Rehse | WHO | Expert | 5, 9, 12 |
| Silvia Dehler | Liechtenstein, Office of Public Health | Expert | 6, 8, 10 |

## National experts supporting the document sharing

| Country focal point(s) and experts involved in the document sharing process | | |
|---|---|---|
| **Name** | **Organisation** | **Role (focal point/document sharing)** |
| Elisabeth Constantinou | Ministry of Health | Focal point |
| Costas Constantinou | Ministry of Health | Focal point |
| Natasa Anastasiadou | Ministry of Health | Focal point<br>Document sharing |
| Valentinos Silvestros | Ministry of Health | Focal point<br>Document sharing |
| Michalis Mendris | Ministry of Health | Focal point |
| Stalo Lazarou | Ministry of Health | Document sharing |

# National experts participating in the assessment process

| National experts participating in the assessment process | | | |
|---|---|---|---|
| **Name** | **National institution** | **Role in the assessment** | **Capacities** |
| Natasa Anastasiadou | Ministry of Health | Coordinator<br>Expert | 1, 2, 3, 6a, 9, 14,<br>4, 5, 6b, 7, 8, 10, 11, 12, 13, 15, 16 |
| Valentinos Silvestros | Ministry of Health | Coordinator<br>Expert | 1, 9, 13<br>4, 6a, 7, 14, 15, 16 |
| Christos Haralambous | Ministry of Health | Coordinator<br>Expert | 4<br>1, 3, 6a, 7, 9, 13, 14, 15, 16 |
| Anna Papandreou | Ministry of Health | Coordinator<br>Expert | 5<br>4, 6a, 7, 15, 16 |
| Aristos Aristodemou | Ministry of Health | Coordinator<br>Expert | 10<br>4, 6a |
| Elena Gabriel | Ministry of Health | Coordinator | 6b |
| Irene Cotter | Ministry of Health/School Health Service | Coordinator<br>Expert | 7<br>5,8 |
| Stalo Lazarou | Ministry of Health | Coordinator<br>Expert | 3<br>1, 4, 5, 6a, 9, 11, 13, 14 |
| Constantinos Papantoniou | Ministry of Health | Coordinator | 5 |
| Giagkos Lavranos | Ministry of Health | Coordinator | 8 |
| Michalis Mendris | Ministry of Health | Coordinator<br>Expert | 10<br>4,12 |
| Lambros Lambrou | Ministry of Health | Coordinator<br>Expert | 11<br>4, 6a |
| Markella Markou | Ministry of Health | Coordinator | 12 |
| Marina Xenofontos | Ministry of Health | Coordinator<br>Expert | 15, 16<br>1, 3, 4, 5, 6a, 7, 8, 9, 13, 14 |
| Linos Hadjihannas | Ministry of Health | Coordinator | 12 |
| Christiana Stavraki | Ministry of Health | Expert | 8, 10, 15, 16 |
| Costas Constantinou | Ministry of Health | Expert | 1, 4, 6a, 6b, 9, 13, 14, 15, 16 |
| Despo Constantinou | Ministry of Health | Expert | 1, 6b, 8, 9, 12, 13, 14, 15, 16 |
| Elena Chrysostomou | Ministry of Health | Expert | 5 |
| Elena Tsaggaridou | Ministry of Health | Expert | 6a, 10, 11 |
| Eleni Poulli | Ministry of Health | Expert | 1, 4, 5, 6a, 7, 8, 9, 10, 13, 14, 15, 16 |
| Elli Theodorou | Ministry of Health | Expert | 5 |
| Emilia Piperidou | National Blood Center | Expert | 3 |
| Fani Theofanous | Ministry of Health | Expert | 3, 4, 8, 15, 16 |
| George Efstathiou | Ministry of Health | Expert | 12 |
| Giannis Argyropoulos | Ministry of Health | Expert | 2 |
| Herodotos Herodotou | Ministry of Health | Expert | 4, 6a, 8, 10, 11 |
| Ioannis Gregoriou | Ministry of Health/Directorate of Purchase and Supplies | Expert | 2, 6b |
| Irene Seleari | Ministry of Health/Civil Defence | Expert | 6a, 11, 15, 16 |
| Stelios Theodorou | Ministry of Health – Crisis Coordinator | Expert | 5, 6a, 6b, 7, 11, 15, 16 |
| Anastasia Antoniadou | Medical School, University of Cyprus | Expert | 12 |
| Anastasios Christou | Ministry of Agriculture, Rural Development and Environment – Veterinary Services | Expert | 12 |

| National experts participating in the assessment process | | | |
|---|---|---|---|
| Andreas Kettis | Fire Service / Fire Department | Expert | 6a, 11 |
| Andreas Stergides | PoE | Expert | 1, 9 |
| Antonis Kantonis | PoE | Expert | 1, 9 |
| Anti Panayiotou | Cyprus University of Technology/UNESCO Bioethics | Expert | 14 |
| Artemis Kontou | KIOS Research & Innovation Centre, University of Cyprus | Expert | 4, 14 |
| Athina Pitsillidou | Ministry of Finance/Ministry of Health | Expert | 2, 5 |
| Athina Tyrimou | Press Office of the Minister of Health | Expert | 8 |
| Monica Kyriacou | HIO | Expert | 5, 7 |
| Barbara Mouchtouri | University of Thessaly | Expert | 1, 9 |
| Christina Tryfonos | Cyprus Institute of Neurology & Genetics | Expert | 3 |
| Christiana Demetriou | WHO Country Office | Expert | 1, 2, 3, 4, 5, 6a, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 |
| Christodoulos Pipis | Ministry of Agriculture, Rural Development and Environment – Veterinary Services | Expert | 6a |
| Christos Kourtis | Ministry of Health – State Laboratory | Expert | 3, 6a, 10, 11 |
| Christos Nicolaou | Ministry of Health/Directorate of Purchase and Supplies | Expert | 5, 6b |
| Constantina Demetriou | Ministry of Health Directorate of Purchase and Supplies | Expert | 6b |
| Constantina Apostolou | Ministry of Finance/Ministry of Health | Expert | 2 |
| Constantinos Pattichis | University of Cyprus – National e-Health Authority | Expert | 14 |
| Despo Pieridou | Microbiology Department Nicosia General Hospital | Expert | 3,4 |
| Dimitris Constantinou | Press Office of the Minister of Health | Expert | 8 |
| Eleni Georgiadou | Pharmaceutical Services – Ministry of Health (National Competent Authority for CTR) | Expert | 14 |
| Giorgos Nikolopoulos | Medical School, University of Cyprus | Expert | 4, 14 |
| Gregory Papageorgiou | Biobank, University of Cyprus | Expert | 14 |
| Ioannis Mamais | European University Cyprus | Expert | 4 |
| Irshad Shaikh | WHO Country Office | Expert | 1, 2, 3, 4, 5, 6a, 7, 8, 9, 10, 11, 13, 15, 16 |
| Jan Richter | Cyprus Institute of Neurology & Genetics | Expert | 3, 4, 6a, 14 |
| Katerina Lemoniati | Ministry of Agriculture, Rural Development and Environment – Veterinary Services | Expert | 12 |
| Krasias George | Ministry of Agriculture, Rural Development and Environment – Veterinary Services | Expert | 10 |
| Lemonia Anagnostopoulou | University of Thessaly | Expert | 1, 9 |
| Loucia Michael | Ministry of Health | Expert | 7 |
| Marco Neira | The Institute of Cyprus (Vector-Borne) | Expert | 10 |
| Margarita Satraki | Ministry of Agriculture, Rural Development and Environment – Department of Environment | Expert | 10 |
| Maria Afxentiou | State General Laboratory | Expert | 11 |
| Maria Evangelou | Ministry of Health | Expert | 5 |
| Maria Paleomylitou | Ministry of Labour and Social Insurance | Expert | 11 |
| Marios Evangelou | State General Laboratory | Expert | 10 |

| National experts participating in the assessment process | | | |
|---|---|---|---|
| Marios Hadjiadamou | Ministry of Finance | Expert | 2 |
| Marios Neofytou | National e-Health Authority | Expert | 4 |
| Marios Violaris | Ministry of Health | Expert | 4, 10 |
| Mary Frangoude | Ministry of Health Directorate of Purchase and Supplies | Expert | 6b |
| Meropi Haralambous | Ministry of Health | Expert | 4, 10 |
| Panagiota Maikanti | Reference Laboratory – SHSO | Expert | 12 |
| Panagiotis Kolios | KIOS Research and Innovation Centre, University of Cyprus | Expert | 4, 14 |
| Panayiotis Kouis | Medical School, University of Cyprus | Expert | 10, 14 |
| Paraskevas Protopapas | Ministry of Finance | Expert | 2 |
| Perseas Koutrouzias | Police | Expert | 11 |
| Photini Chari | SHSO/Ministry of Health | Expert | 5, 6a, 7, 11, 15, 16 |
| Popi Karaolia | Nireas – International Water Research Center, University of Cyprus | Expert | 3, 4, 14 |
| Riana Constantinou | Ambulance Service – SHSO | Expert | 5, 6a, 7, 11, 15, 16 |
| Savvas Savva | Ministry of Agriculture, Rural Development and Environment – Veterinary Services | Expert | 12 |
| Shoaib Hassan | WHO Cyprus | Expert | 1, 2, 3, 4, 6a, 15, 16 |
| Skevi Eleftheriou | Ministry of Finance | Expert | 2 |
| Sotiria Georgiadou | Ministry of Agriculture, Rural Development and Environment – Veterinary Services | Expert | 12 |
| Stalo Zani | Ministry of Health | Expert | 4 |
| Stefani Georgiou | HIO | Expert | 12 |
| Vasiliki Christodoulou | Veterinary Laboratory/Veterinary Services | Expert | 3, 4, 10, 12 |
| Vasilis Mouskos | Fire Services | Expert | 11 |
| Yiota Hajikyprianou | Immunology Laboratory, Nicosia General Hospital | Expert | 3, 4 |
| Zina Kanther | Pharmaceutical Services – Ministry of Health | Expert | 12 |

# The mission agenda

| | Monday | Tuesday | | Wednesday | | Thursday | | Friday |
|---|---|---|---|---|---|---|---|---|
| 07:30 | | Registration | | Registration | | Registration | | |
| 07:45 | | | | | | | | |
| 08:00 | | C.5 Human Resources | | Breakout room 1 - **C.12 AMR/HAIs** *(Assessment of in-depth capacities)* | Breakout room 2 - **C.6 Health Emergency Management** - planning, IMS, risk profiling, PHSM *(Assessment of in-depth capacities)* | Breakout room 1 - **C.3 Laboratory** *(Assessment of in-depth capacities)* | Breakout room 2 - **C. 10 Zoonotic diseases and threats of environmental origin, including those due to the climate** *(Assessment of in-depth capacities)* | Internal assessment team meeting (including independent coffee break if needed) |
| 08:15 | | | | | | | | |
| 08:30 | | | | | | | | |
| 08:45 | Welcome & Registration | | | | | | | |
| 09:00 | Opening Remarks (country) | C.7 Health Service Provision | | | | | | |
| 09:15 | | | | | | | | |
| 09:30 | Overview and key aspects of the assessment process (ECDC) | | | | | | | |
| 09:45 | | C.2 Financing | | | | | | |
| 10:00 | Overview of the country public health structure, prep and resp mechanisms and generic and specific plans available relevant to the assessment (country) | | | | | | | **OPTIONAL** - Placeholder for pre-view of the recommendations with country core team |
| 10:15 | | Break | | Break | Break | Break | Break | |
| 10:30 | Break | C.11 Chemical events | | Breakout room 1 - **C.12 AMR/HAIs** *(Assessment of in-depth capacities)* | Breakout room 2 - **C.6 Health Emergency Management** - planning, IMS, risk profiling, PHSM *(Assessment of in-depth capacities)* | Breakout room 1 - **C.3 Laboratory** *(Assessment of in-depth capacities)* | Breakout room 2 - **C.10 Zoonotic diseases and environmental threats** *(Assessment of in-depth capacities)* | Main findings, conclusions, recommendations and next steps (ECDC presentation and discussion with Country) |
| 10:45 | | | | | | | | |
| 11:00 | | | | | | | | |
| 11:15 | Assessment of cross-cutting aspects - Scenario based discussion | | | | | | | |
| 11:30 | | C.13 Union level coordination | | Breakout room 1 - **C.4 Surveillance** *(Assessment of in-depth capacities)* | Breakout room 2 - **C.6 Health Emergency Management** - Medical Counter Measures *(Assessment of in-depth capacities)* | Buffer for further in-depth discussion<br>OPTIONAL - Pre-view of the recommendations with country core team<br>Wrap-up session | | |
| 11:45 | | | | | | | | |
| 12:00 | | | | | | | | Concluding remarks (country) |
| 12:15 | | Lunch | | Lunch | | Lunch | | **OPTIONAL** - Lunch |
| 12:30 | Lunch | | | | | | | |
| 12:45 | | | | | | | | |
| 13:00 | | | **Arranged transportation** | | | Buffer for further in-depth discussion<br>OPTIONAL - Pre-view of the recommendations with country core team | | **Can be moved later if we continue after lunch** - Debrief on the ECDC assessment process (structure, preparation, organization) |
| 13:15 | C.1 IHR | C.8 RCCE | | Breakout room 1 - **C.4 Surveillance** *(Assessment of in-depth capacities)* | Breakout room 2 - **C.6 Health Emergency Management** - Medical Counter Measures *(Assessment of in-depth capacities)* | | | |
| 13:30 | | | | | | | | |
| 13:45 | | | **Site visit to the National laboratory** | | | Internal assessment team meeting | | |
| 14:00 | C.9 PoE | | | | | | | |
| 14:15 | | C.15 Recovery and C.16 Action plan (together in the same session) | | | | | | |
| 14:30 | | | | | | | | |
| 14:45 | | | | | | | | |
| 15:00 | Break | Wrap-up Day 2 (ECDC together with country) | | Wrap-up Day 3 (ECDC together with country) | | | | |
| 15:15 | C.14 Research | | | | | | | |
| 15:30 | | | | | | | | |
| 15:45 | | | | | | | | |
| 16:00 | | | | | | | | |
| 16:15 | Wrap-up Day 1 (ECDC together with country) | | | | | | | |
| 16:30 | | | | | | | | |

Plenary
Breakout
Site visit
Break

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