CAPACITY/CAPABILITY ASSESSMENT

Country report: ECDC Public Health Emergency Preparedness Assessment for Belgium, 2024

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

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Abbreviations

AMC	Antimicrobial consumption
AMR	Antimicrobial resistance
AWaRe	Access, Watch, Reserve classification
BAPCOC	Belgian Antibiotic Policy Coordination Committee
BSL-3/4	Biosafety level –3/4
CBRN	Chemical Biological Radiological and Nuclear
ECDC	European Centre for Disease Prevention and Control
EEA	European Economic Area
EU	European Union
EQA	External Quality Assessment
EWRS	Early Warning and Response System
FPS	Federal Public Service Health, Food Chain Safety and Environment
GLASS	Global Antimicrobial Resistance and Use Surveillance System
GPP	General Preparedness Plan
HAI	Healthcare-associated infection
HOST	Hospital Outbreak Support Team
HSC	Health Security Committee
ICU	Intensive Care Units
IHR	International Health Regulations
IPC	Infection Prevention and Control
MCM	Medical Counter-Measure
MDRO	Multidrug-resistant Organism
NCCN	National Crisis Center
NAP-AMR	National Action Plan on Antimicrobial Resistance
NRC	National Reference Centre
NRL	National Reference Laboratory
OECD	Organisation for Economic Co-operation and Development
OST	Outbreak Support Team
PHEPA	Public Health Emergency Preparedness Assessment
PoE	Points of Entry
PPE	Personal Protective Equipment
PREZODE	Preventing Zoonotic Disease Emergence
PSCC	Personnel Surge Capacity Cell
RAG	Risk Assessment Group
RCCE	Risk Communication and Community Engagement
RMG	Risk Management Group
SARI	Severe Acute Respiratory Infection
SOP	Standard Operating Procedure
SCBTH	Serious Cross-Border Threats to Health
SPAR	State Party Self-Assessment Annual Report
VOP	Viral Outbreak Plan
WGS	Whole Genome Sequencing

Executive summary

Background

As stated in Article 8 of the Regulation (EU) 2022/2371 on Serious Cross-Border Threats to Health (SCBTH), ECDC has the responsibility, in coordination with relevant Union agencies and bodies, to conduct Public Health Emergency Preparedness Assessments (PHEPA) of all 30 European Union and European Economic Area (EU/EEA) countries every three years regarding the state of implementation of their national prevention, preparedness and response planning. This assessment is based on the 16 capacities included in the template to be used by countries when providing information on their prevention, preparedness and response planning in accordance with Article 7 of the SCBTH regulation. The aim of the PHEPA is to improve prevention, preparedness and response planning in EU/EEA countries through the implementation of evidence-based recommendations following individual country assessments. Within nine months of the receipt of the ECDC assessment report, if applicable, countries are requested to provide an action plan addressing the proposed recommendations of the assessment.

This report presents the findings and recommendations of the first assessment in the three-year programme conducted in Belgium. This involved a desk review of relevant documents, followed by a five-day mission conducted from 13 to 17 May 2024. As per the established assessment process, of the 16 capacities included in the Article 7 (SCBTH) self-assessment template, the ECDC-led team assessed five capacities in depth and validated Belgium's responses to the Article 7 questions for the remaining capacities. The five capacities assessed in depth were Capacity 3 – Laboratory; Capacity 4 – Surveillance; Capacity 6 – Health Emergency Management; Capacity 10 – Zoonotic diseases and threats of environmental origin, including those due to the climate; and Capacity 12 – antimicrobial resistance (AMR) and healthcare-associated infections (HAIs).

Main recommendations for each capacity assessed in depth

Capacity 3. Laboratory

Finalise lessons learned from the scaling up of the laboratory testing during the COVID-19 pandemic and, if needed, ensure that a formalised plan for large scale surge capacity testing is available.

Further develop and finalise the 'be.Prepared' platform for effective automated reporting of laboratory and epidemiological data, with integration of genomic data, data from clinical laboratories and NRCs, reuse of the national registry number to bolster the mandatory notification of mandatory notification diseases.

Capacity 4. Surveillance

Expand the ARI-ILI sentinel surveillance network, by a) including more general practitioners (GPs) in the electronic health record-based surveillance of acute respiratory infections in primary care, b) expand the ILI sentinel surveillance network in the long-term care facilities for the elderly, by increasing the participation rate in underrepresented regions, and c) improve hospital-based surveillance of SARI, including through the extraction of data from electronic health records and automation of the reporting process.

Further expand capacities to assess pandemic threats, by: a) defining protocols for investigation of new pathogens and/or variants in coordination with subnational entities; b) setting up cooperation and data-sharing agreements with regional vaccination registries, considering the national and regional legal frameworks; and c) formalising and documenting agreements and partnerships with academia and other stakeholders to strengthen modelling and forecasting capabilities.

Capacity 6. Health Emergency Management

Distinguish between the strategic approach (General Preparedness Plan) and the operational documents (Viral Outbreak Plan), and how these relate to each other and apply between the federal level and the federated entities. The GPP could retain its strategic scope and the federal operational plans could provide the necessary federal aspect linking to the federated entities. However, it would also be necessary to ensure that the various plans of the federated entities take account of and are consistent with the federal plans.

Continue the development of tools to ensure monitoring of supply and estimating demand, taking into account the reporting requirements that would be applicable in case of a public health emergency. The relevant tools should allow to collect information for all the relevant types of products that fall under the definition of Medical Counter-Measure (MCM). Existing provisions under the general preparedness plan or relevant policies should be revised to reflect current and future initiatives in this field. Coordination between the regional and federal level should be clarified in terms of reporting related to the monitoring of supply and estimated demand.

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

Establish a formalised One Health governance for prevention, preparedness and response to zoonotic and environmental health threats including the different sectors and authorities from the federal and regional levels.

Finalise the modules on zoonotic diseases and vector transmission currently under development as part of the Viral Outbreak Plan complementing the GPP. Refer to the relevant existing plans related to climate change and environmental health in the GPP and ensure alignment by detailing how these plans relate to one another.

Capacity 12. Antimicrobial resistance (AMR) and healthcare-associated infections (HAIs)

Identify high-priority Multidrug-resistant Organisms (MDRO) and clarify processes for notification. Determination of high-priority Multidrug-resistant Organisms is needed to clarify which Multidrug-resistant Organism require immediate action by Infection Prevention and Control (IPC) personnel and outbreak support teams, now that 'Multidrug-resistant Organism outbreaks' are on the federated entities' lists of notifiable diseases.

To strengthen the data-driven HAI prevention efforts of the Belgian Antibiotic Policy Coordination Committee (BAPCOC) working groups, establish a National IPC Programme to coordinate actions that target priority HAIs based on national data. This programme should have the responsibility of identifying gaps in IPC at national level and coordinating interventions to close those gaps.

Conclusions

Although Belgium is a complex country due to the federated structure, the strong collaborative working observed between the federal level and the federated entities provides a firm base for future enhancement of the prevention, preparedness and response planning function in public health. A general observation was that the levels indicated by Belgium in the Report on EU/EEA countries' Prevention, Preparedness and Response Planning 2023 (under Article 7 CBTH) in several questions were lower in the self-assessment than the observations made during the assessment. Although DG Preparedness and Response is a new department in the Federal Public Service (FPS) Health, Food Chain Safety and Environment, the general response structure to threats as they emerge, led through the National Crisis Centre (NCCN) is well established. In addition, the federated entities have come to similar conclusions on the approach to be adopted in planning for and responding to crisis. This should enable DG Preparedness and Response, as it further develops and finalises its General Preparedness Plan (GPP) and operational plans, to align and link with these pre-existing structures to provide a robust framework for the management of public health threats.

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, in order to ensure a more effective response across the EU to deal with health-related emergencies. Hence, the European Commission developed and published on the 23 November 2022 the Regulation (EU) 2022/2371 on serious cross-border threats to health (SCBTH)[1].

Within the SCBTH 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 Health Crisis and Pandemic Plan, the regulation also outlined the importance in updating and aligning Member States' prevention, preparedness and response plans. To this end, a template was developed under Article 7 of the SCBTH[2] such that Member States could provide the Commission with an update on the latest situation with regard to their prevention, preparedness and response planning and implementation at national level. In order to support the assessment of those plans, as per Article 8 of the SCBTH, 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. These assessments are based on the 16 capacities included in the template under Article 7 of the SCBTH.

ECDC has developed a methodology for public health emergency preparedness assessment (PHEPA) to implement Article 8 of the SCBTH and the associated delegated act[3]. The assessment process is designed to maintain consistency within the EU/EEA countries throughout the three-year cycle, while allowing for adaption of plans if the national circumstance requires.

Aim and objectives

The aim of the ECDC PHEPA process drawn from Article 8 of the SCBTH Regulation is to improve prevention, preparedness and response planning in EU/EEA countries through the implementation of evidence-based recommendations following individual country assessments. Within nine months of the receipt of the ECDC conclusions, if applicable, countries are requested to provide an action plan addressing the proposed recommendations of the assessment.

The specific objectives of the assessment process are to:

- Validate the self-assessment of preparedness by countries in the 16 capacities covered by the outputs from the most recent IHR State Party Self-Assessment Annual Report (SPAR[4]) and Article 7 template.
- Collaborate with countries to identify challenges, bottlenecks, gaps or areas for improvement concerning the 16 capacities referred to in Article 7 (a list of capacities assessed is available as Annex 1).
- Encourage the inclusion of key elements within the prevention, preparedness and response planning structure such as cross-sectorial and cross-border coordination, crisis management, response governance, communication, plan testing, evaluation and regular reviews, according to lessons identified from the response to public health emergencies.
- Use the opportunity of a standardised approach to the assessment process 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.
- Provide support to countries in enhancing their national prevention, preparedness, and response capacities through recommendations based on the assessment, and providing targeted assistance upon request.

Observations on the assessment process

The assessment of Belgium was the first Public Health Emergency Preparedness Assessment conducted under the auspices of the SCBTH regulation as laid out in Article 8 of the regulation and the associated delegated act. For this purpose, an assessment team composed of 13 experts together with the country focal point and over 90 national

[1] 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. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R2371&from=EN

[2] 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. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1808

[3] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401232

[4] Available at: https://www.who.int/emergencies/operations/international-health-regulations-monitoring-evaluation-framework/states-parties-self-assessment-annual-reporting

experts from Belgium worked on implementing the assessment process consisting of a desk review phase and a country visit that took place between 13 and 17 May 2024.

This was a pilot mission with a truncated planning phase of two months compared with what will become standard practice of six months. Hence the time between receipt of documents and the face-to-face mission, the so-called documentary review phase and mission planning was short. Despite this, all documents requested were received prior to the mission and a specific teleconference for each in depth topic was held to meet the dedicated teams, exchange information and as an opportunity to seek clarifications on both sides.

As per the established assessment process, of the 16 capacities included in the Article 7 (SCBTH) self-assessment template, the ECDC-led team assessed five capacities in depth and validated Belgium's responses to the Article 7 questions for the remaining capacities. The five capacities assessed in depth were Capacity 3 – Laboratory; Capacity 4 – Surveillance; Capacity 6 – Health Emergency Management; Capacity 10 – Zoonotic diseases and threats of environmental origin, including those due to the climate; and Capacity 12 – Antimicrobial resistance (AMR) and healthcare-associated infections (HAIs).

The mission itself was conducted with an open and transparent approach from the host country, including sharing of relevant documents for the assessment and engaging in a productive discussion.

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

Findings and recommendations per capacity

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

In Belgium, legal documents are in place that ensure coordination across all administrative levels for preparedness and response planning and during a public health emergency. Coordination with sectors responsible for critical infrastructure is foreseen, especially with the National Crisis Centre (NCCN). The new General Preparedness Plan (GPP) includes a mapping of stakeholders and frameworks. The Standard Operating Procedure (SOP) Medische wacht/Vigilance sanitaire describes the roles and responsibilities within the country for reporting under the IHR and EWRS and the function of the national 24/7 system for alert and response. Complementary alert- or disease-specific plans are in place.

Legislation and plans are comprehensive and solid, national reporting obligations can be fulfilled, and stakeholders and decision-making processes are outlined. From discussions during the assessment visit it became clear that the quality of cross-sectoral coordination is not consistent for all events. Stakeholders reported that coordination with the NCCN has improved during and after the COVID-19 pandemic. It was also reported that the potential of the IHR for cross-border exchange of information has not yet been explored.

Recommendations:

- Formalise and exercise the collaboration with and integration of health emergencies in the work of the NCCN;
- Finalise the revision of the SOP Medische wacht/Vigilance sanitaire (document from 25 October 2021) and use it for advocacy and awareness raising among stakeholders.

Capacity 2. Financing

Belgium has funds to respond to a PH emergency at federal and regional level. Depending on the sector, the emergency/crisis budget will come from the federal (i.e. animal health) or regional level. Ultimately and in case of need, the federal level will always be available to support the regions as per the decree for financial solidarity (document not provided).

There is also a level of contingency funding available at the federated entity level for outbreaks annually but not at the federal level. Hence, this contingency funding for health threats is only tested at the regional level. Most of the regions (Wallonia, Flanders, and Brussels) have regular tests on the financial resources; the German-speaking community plans to do it.

There is a module within the GPP in which the procedures and mechanisms for accessing financial resources corresponding to health threats are included. However, this has yet to be finalised, so although funds would be available to be used all over the territory it is not clear what is available nor the procedure to activate/use it.

Recommendation:

- Clarify the procedures and mechanisms for the federal level to access contingency funding for public health emergency response (e.g. hospital service, outbreak related research) as part of the update to the relevant module in the GPP.

Capacity 3. Laboratory

Belgium provided information describing how laboratory capacity can be scaled up during crisis. Mandates and responsibilities of involved partners, processes for scaling up, financial aspects and challenges have been documented. Based on amended legislation, in crisis situations, authorities such as Sciensano are mandated to coordinate NRCs and clinical laboratories and the scaling up of testing, first deploying specialised clinical laboratories and if needed full clinical laboratory network. Identified key points for upholding a high testing capacity included ensuring staff competence and availability, maintaining quality framework and scientific integrity for the testing sites, supporting the maintenance of high standards for full laboratory process and especially pre-analytical steps.

Ensuring that laboratories reported sufficient metadata together with the laboratory results was identified as a weak point. During the COVID-19 pandemic, the reporting of complete data from laboratories was linked to reimbursement of the testing. Still data reporting was not fully satisfactory. During the COVID-19 pandemic, Belgian authorities set up a federal platform for testing that provided surge capacity for PCR testing complementing the existing laboratory capacity. The formal agreement assigning the equipment to these laboratories of this federal platform is valid until the end of 2025. Platform partners is a consortium of eight pairs between university (research) and public health sector laboratories. NRC and Sciensano were responsible for testing guidelines and

quality. The federal platform could add a theoretical capacity of 48 000 tests per day. Due to lack of binding agreements on sample allocation and issues related to collaboration with clinical laboratories to the national platform, and the lack of a clear, government-imposed workflow for the use of this platform, the capacity was never fully used. The maximum testing capacity deployed during the pandemic corresponded to a weekly testing rate of 0.01 to 0.1 percent of the population. The scaling up of laboratory testing was also exercised in the 2023 mpox outbreak. A flexible budget to be used in outbreak situations is also reserved in Sciensano.

Information was provided that outlines the process for validation of laboratory tests before use for human diagnostics in Belgium. This includes a validation procedure in an NRL/NRC under the supervision of Sciensano. The NRC provides guidelines for testing for clinical laboratories and set up and coordinate a network of clinical laboratories where testing capacity is needed. Full validation of new tests and roll out to clinical laboratories takes one to three months.

During the COVID-19 pandemic, an *ad hoc* electronic system for reporting laboratory results was set up and used. Reporting using this system was legally linked to reimbursement system for the involved laboratories, still the system was not fully efficient due to lack of ability to enforce this legal system and lack of uniform reporting system in the differentiated landscape of laboratories. For routine surveillance purposes there is a system for reporting results between clinical laboratories, NRCs and Sciensano. A new system is being developed that will include laboratory, epidemiological, and genomic variables: the 'be.Prepared' system. The system is planned to be used by NRC and clinical laboratories for Salmonella and influenza, but will be expanded to include reporting functionalities for additional diseases. Sciensano is currently developing strategies and incentives for making clinical laboratories using the system.

Belgium has operational BSL-3 laboratories located in NRC, the defence laboratory, research settings, etc. In Sciensano there are five active BSL-3 laboratories designated for different disease areas, including bacterial, viral, fungal and veterinary pathogens. At least one of the laboratories has a safety box for deactivation of samples suspected to be of BSL-4 class. No BSL-4 laboratory is available, but a formal agreement is in place for sending samples to a BSL-4 laboratory in another EU country in case of need.

Belgium has a system for transportation of sample referral between laboratories for diagnostics and confirmation of priority diseases. The system covers pathogens in Category A and Category B. Sciensano is responsible for issuing guidelines for cargo and packaging material that ensures shipment following international standards. For transportation of Category A and Category B samples there are routines and standards, and a formal agreement with international couriers that can be mobilised for shipping samples across national borders in an emergency situation.

Sciensano, many of the NRC, and some of the clinical laboratories have access to WGS equipment. Prioritisation of laboratories that should have such capacity is to some extent guided by the ECDC strategic plan for integrated genomic typing. During the COVID-19 pandemic Belgium also showed capacity for processing large volumes of samples using WGS. Belgium declare that they can use existing capacities to sequence also 'new pathogens' if this would be needed. Metagenomic sequencing for the unknown sample is also applied ad hoc within the Belgian laboratory system. The 'be.Prepared' infrastructure will facilitate sharing of sequencing data between clinical laboratories, NRC and Sciensano.

Belgium has a solid system for biosafety, including clear responsibilities of Sciensano to issue guidelines and permits along international standards, perform inspections, organise advisory board, perform risk assessments, etc. There is also an active committee, the Be-Biosafety server, that support upholding high biosafety standards. The overall biosafety system in Belgium is of high standards. The Biosecurity aspects are less developed. Routines are in place aiming to follow international recommendations, but governance, standards and work processes are not fully in place. There are no existing legal requirements and national processes in place promoting biosecurity aspects.

Belgium has a well-developed laboratory system ensuring quality in the laboratory system. The role for ensuring quality is clear. Accreditation following ISO15189 is mandatory for the NRCs and this is controlled by an official function (Belac – the Belgian Accreditation body). Clinical laboratories do not need to be accredited, but need to follow national standards that are well aligned with ISO15189. Clinical laboratories need to be licensed by the Ministry of Health to be reimbursed by health insurance for the human diagnostic tests they perform.

Belgium has a well-developed laboratory system, including a tier-based approach for diagnostic testing and confirmation. More than 100 clinical laboratories collaborate with NRLs/NRCs for diagnostics and case confirmation. The system has a legal basis and is state funded. Quality aspects are under the supervision of Sciensano.

Recommendations:

- Consider elaborating further lessons learned from the scaling up of the laboratory testing during COVID-19 pandemic and if needed, ensure that a formalised plan for large scale surge capacity testing is available also beyond 2025. Identified issues linked to upscaled testing capacity, including ensuring efficient reporting of laboratory results and key metadata, and clarifying sample flow and distribution of tasks to avoid down-prioritisation of routine diagnostics within existing capacities should be addressed.
- Further develop and finalise the 'be.Prepared' platform for effective automated reporting of laboratory and epidemiological data, with integration of genomic data, data from clinical laboratories (e.g. Epilabo 2.0) and NRCs, reuse of the national registry number to bolster the mandatory notification of mandatory notification diseases, and the coupling with health registries to analyse the impact of mortality and vaccination. Implementation of the system should include a plan for onboarding clinical laboratories.
- Biosafety aspects are of high standards in Belgium. However, the biosecurity aspects are less developed. It is recommended to strengthen the biosecurity system for laboratories involved in handling infectious material. This includes raising awareness/develop guidelines for biosecurity and assess if legislative aspects need to be modified.

Capacity 4. Surveillance

Surveillance of communicable diseases in Belgium is undertaken as one of the public health core functions. In the latest years, efforts have been put in place to modernise surveillance systems and progressively make more use of electronic health records and automated reporting to improve their performance. However, for most notifiable diseases, the surveillance systems still rely on manual notification of cases through different electronic platforms managed at the regional level. Although Sciensano coordinates country-wide surveillance activities and outputs, there is autonomy at the regional level (Federated Entities) in aspects such as the list of diseases under mandatory notification (defined in regional legislation) and the respective case definitions.

A sentinel network of clinical laboratories (Epilabo 1.0) is in operation, including approximately 50 laboratories across the national territory and covering approximately 40 pathogens (including respiratory syncytial virus and influenza), for which individual-level positive lab-test data with minimal demographic information are shared with Sciensano on a weekly basis in a non-automated way. This system is being updated to develop an automated reporting system comparable to what was used during COVID-19 but including the surveillance of additional pathogens (Epilabo 2.0 within the 'be.Prepared' infrastructure).

For acute respiratory infections, Belgium has robust national surveillance systems in place, covering all levels of care (primary care, hospitals, long-term care facilities). Country-wide wastewater monitoring has focused on COVID-19 since 2021, and includes polio (1x/month), influenza and RSV (weekly during winter), and other pathogens in case of an emergency, e.g. mpox, from 2024. There is also a mortality monitoring system in place, albeit for all causes and not respiratory-disease specific (Be-MOMO: Belgian Mortality Monitoring). All year round (with a few exceptions in the summer), Sciensano publishes a weekly respiratory bulletin covering these surveillance components, including a description of the level of circulation and severity of acute respiratory infections but also other indicators such as GP workload and work absenteeism. Epidemiological thresholds (low, medium, high activity) are defined per surveillance system and some of these are included in the RespiRadar monitoring tool. In situations of increased activity of respiratory viruses or other events of public health concern, the Risk Assessment Group (RAG) is convened to advise the Risk Management Group (RMG), led by the Federal Authorities and in charge of defining public health measures and communicating with healthcare professionals and the general population.

At primary care level, there are currently two surveillance systems. The first network, existing before the COVID-19 pandemic, is the sentinel network of GPs. They collect information on multiple infectious and non-infectious diseases topics. Physicians participating in the surveillance of respiratory infections perform clinical and virological surveillance year-round for ARI and ILI (according to the case definition). Nasopharyngeal swabs are also taken from a convenience sample of these patients and tested for influenza and several other respiratory viruses by the National Reference Centre for Influenza (NRC Influenza).

The second network, developed during the COVID-19 pandemic, is the automated Infectious Diseases Barometer, which currently includes approximately 60 GP offices, participating daily, covering a geographically and demographically representative sample of 2% of the national population. The surveillance system includes year-round reporting of aggregated data (diagnosis codes for COVID-19, ARI and ILI) from local providers to the national level, including numbers of patients for whom specific International Classification of Primary Care version 2 (ICPC-2) diagnostic codes were recorded. The data extraction and submission are in the process of being automated through the use of e-forms within 2024, with no added effort from the participating GPs. During the virological surveillance period (from October to May), nasopharyngeal swabs are also taken from a convenience sample of these patients and tested for influenza and several other respiratory viruses by the National Reference Centre for Influenza (NRC Influenza).

Surveillance of severe acute respiratory infections (SARI) relies on manual extraction, validation, and reporting of individual data to the national level from a network of 10 sentinel hospitals that are geographically spread and whose catchment population is representative of the national population (approx. 10% coverage). Surveillance has been scaled up post-COVID-19 to be performed year-round. From all patients under surveillance, a respiratory specimen is taken and multiplex PCR testing is performed during the winter period to identify influenza, RSV, SARS-CoV-2 and other respiratory viruses (adenovirus, parainfluenza, metapneumovirus, etc) at the NRC Influenza. Testing is limited to SARS-CoV-2 and influenza outside the winter period. A subset of specimens undergoes further virus characterisation and complementary testing for other pathogens (priority given to most severe cases).

Following a pilot study, a surveillance of ILI in nursing homes (long-term care facilities for the elderly) was set up in 2022 to monitor ILI among nursing home residents. It requires manual extraction, validation and reporting of data to the national level from a sentinel network of 41 nursing homes that are geographically spread and cover 2.5% of nursing home beds. For a select group of patients under surveillance, a respiratory specimen is taken and multiplex PRC testing is performed during the winter period to identify influenza, RSV, SARS-CoV-2 and other respiratory viruses.

The surveillance system for respiratory infections was effectively scaled up during the COVID-19 pandemic, with increased testing capacity and breadth of data collected, but the implementation is not clearly documented. In the context of the COVID-19 pandemic response, an ad hoc system was deployed to monitor some healthcare utilisation indicators such as testing and contact tracing capacity. However, the operation of the system required manual data submissions, the system's documentation is patchy, and its usefulness has not been assessed. Hospital bed capacity, including in intensive care units (ICU) or emergency services, is not routinely monitored. In crisis situations, however, the Belgian Incident Tracking System (BITS), activated and operated by the Ministry of Internal Affairs, does allow monitoring of these indicators in real time (depending on the frequency of updates provided by the hospitals).

Complemented by partnerships with academia, Sciensano has installed capacity to assess multiple aspects of pandemic threats, including through studies on routes of transmission, transmissibility and effective reproduction number, severity of disease and public health impact, vaccine effectiveness, and forecasting through mathematical modelling. Belgium has mechanisms for reporting urgent public health events. At the national level, the RAG can be activated upon signal detection and a risk assessment is carried out, with recommendations to all stakeholders. Signal detection, however, especially for non-respiratory pathogens, might depend on ad-hoc communication, mostly via email, from the regional public health departments or other sources such as international (ECDC), or other sectors such as the veterinary sector for zoonoses. The regional level is responsible for the management of detected events, such as outbreaks, including field investigation, source identification, contact tracing (if applicable), coordination of public health measures, and communication with the local population, healthcare providers, and decision-makers. Roles and procedures are defined during each outbreak or event, with an approach that might vary from region to region and is not well documented.

Recommendations:

- Continue the development and integration of current surveillance systems, focusing on digitalisation (Epilabo 2.0, Infectious Diseases GP Barometer, Hospital SARI surveillance), reducing the burden of notification, and ensuring nationwide geographical coverage.
- Expand the ARI-ILI sentinel surveillance network by including more GPs in the electronic health record-based surveillance of acute respiratory infections in primary care.
- Improve hospital-based surveillance of SARI, including through the extraction of data from electronic health records and automation of the reporting process.
- Include details on how to scale up surveillance systems in the preparedness and response plans, covering aspects such as the increase in number of reporting sites, adjusting or expanding the data collected for surveillance, and improving the timeliness of reporting.
- Explore, harmonise, and make use of alternative data sources or information systems for monitoring of healthcare utilisation and spare capacity, including but not limited to health emergency periods.
- Identify and document the wastewater monitoring system governance and responsibilities and evaluate the outputs, public health impact and cost effectiveness of the system.
- Further expand capacities to assess pandemic threats, by: a) defining protocols for investigation of new pathogens and/or variants in coordination with subnational entities; b) setting up cooperation and data-sharing agreements with regional vaccination registries, considering the national and regional legal frameworks; and c) formalising and documenting agreements and partnerships with academia and other stakeholders to strengthen modelling and forecasting capabilities.
- Harmonise the list of notifiable diseases and case definitions across regions, in line with the European legal framework (Regulation (EU) 2022/2371 of the European Parliament and of the Council on serious cross-border threats to health (SCBTH) and Commission Implementing Decision (EU) 2018/945 on the communicable diseases and related special health issues to be covered by epidemiological surveillance as well as relevant case definitions).

Capacity 5. Human resources

A generic module in the GPP describes identification of the personnel resources that can be potentially mobilised or transferred temporarily during a health crisis. However, it does not offer regional plans for surges in demand for hospital services, outpatient services, lab services, and other public health services. Personnel Surge Capacity Cell (PSCC) has been formed; however, its capacity needs to be exercised.

The three Belgian Regions (Wallonia, Flanders, and Brussels) have variable level of mechanisms and plans to ensure surge in human resources in the event of public health emergency. There is lack of formal process and/or agreement between regions to receive and/or exchange human resource that could support a response and as of now it is mostly based on personal relationships. Due to shortage in health workforce, there is a plan for distribution and repurposing of the public health workforce by introducing personnel training.

Recommendations:

- Develop an operational plan including regional plans to ensure equal regional capacities to identify, mobilise and transfer health professionals.
- Formalise the processes of staff allocation in between the regions.

Capacity 6. Health emergency management

The DG Preparedness and Response is a recently established DG within the Federal Public Service Public Health, Food Chain Safety and Environment (FPS health). The key documents provided for review in advance of the face-to-face mission included the general preparedness plan (GPP), first published in December 2023 and two more specific plans, the CBRN plan and the virus outbreak plan (VOP), both in draft. This specific CBRN medical response plan (PIM CBRNe) is to be distinguished from the CBRN terror plan, established in 2018 by royal decree, and placed under the authority of the NCCN (National Crisis Center).

Other documents describing the operational response at a more regional level were also provided to complement these federal plans. In addition, presentations provided in advance of and during the mission on the structure of preparedness and response at the national level from FPS health and from the NCCN as well as the structures at the regional entity level from Brussels, Flanders, the German speaking community and Wallonia highlighted the complex governance structure which exists in Belgium. The national level, both health and NCCN, and regional entities were also well represented at the in-depth discussions held during the face-to-face meeting which enabled a comprehensive discussion.

Planning

The GPP is very comprehensive, and is therefore not suitable for guiding any response activity. In addition, there are differences of interpretation regarding the purpose and scope of this plan. The federal level considers the plan to be a repository and necessarily generic, while the federated entities ask for more or complementary operational elements to align their plans.

The style of the VOP is an interesting concept which overcomes one of the general criticisms of the response to COVID-19 worldwide, where plans were seen as too focussed on pandemic influenza. Using a defining characteristic of the mode of infection as a way to divide groups of pathogens and therefore not having to develop a separate plan for each one can have value. However, in its present form, the VOP combines strategic and operational elements. Some sections are also repetitive. An alternative approach could be a generic operational plan that applies to all infectious diseases with sections or annexes grouping the diseases as already described in the VOP.

Planning at the federated entities level is also in progress. It is good to see that they have all individually developed a similar 'building block' approach to emergency planning, choosing the appropriate combination of blocks of response activity dependent on the challenge. Having a comparable approach across the federated entities simplifies an understanding of the response, an important consideration in an otherwise complex federated system. Aligning the federated entities planning arrangements to the national arrangements becomes the next challenge once the federal planning process is more mature.

Recommendations:

- Emergency management planning framework: define more clearly the vision, scope and next steps for the emergency management system. This could lead to and assist in a structured visualisation of this framework and thus help to identify overlaps or gaps. This work should be continued between the federal level and the federated entities, but also among the federated entities, as several common approaches were identified during the exchanges.
- Distinguish between the strategic approach (GPP) and the operational documents (VOP) and how these relate to each other, but also between the federal level and the federated entities. The GPP could retain its

strategic scope and the federal operational plans could provide the necessary federal aspect linking to the federated entities. However, it would also be necessary to ensure that the various plans of the federated entities take account of and are consistent with the federal plans.

Risk profiling

Risk profiling is a very important process in emergency preparedness as it enables more informed targeting of effort and resources at the more consequential risks. In Belgium, risk profiling is carried out every three years, coordinated by the NCCN, producing a national risk assessment. The public health input into this is led by FPS and the federated entities are involved in some sub-working groups. Although a relatively small country, the topography, level of industrialisation and urbanisation, for example, can differ markedly from region to region, which means that risks might also vary between the federated entities. If variation exists, then regular risk profiling with the federated entities will also not only enable risks to be prioritised, but also rationalise efforts and avoid the multiplication of plans or the fatigue of the entities with the most limited human resources. It is important to note that there should be no expectation to have a plan for every individual hazard, so it is good to have a prioritisation.

Recommendations:

- Building on positive experience of collaboration on working groups on stocks, further extend the working group approach to cover other areas central to plans of federated entities (e.g. building blocks/fiches used to design the response) taking capacity and priority into account as resources across the federated entities to support such endeavours varies.
- Due to the variation in Public Health risks affecting different regions in the country, it would be important to involve more the federated entities through FPS in the next risk profiling cycle to explore that degree of variation.
- Create a secure national platform to exchange plans between different federal entities (i.e. buildings block and fiches methods), align methodologies and exchange experience to work on risk profiles. This does not need to be a complex platform but will need to be managed and supported technically.

Mutual aid

Cooperation procedures exist with neighbouring and cross-border regions. Collaboration procedures exist, particularly in the areas of surveillance and contact tracing. Specialised extra-national laboratories can also be used for certain types of research. However, there is no unified vision of this mutual aid and no existing reinforced framework, which could lead to gaps.

Recommendation:

- Cross-border mutual aid – Map and formalise the agreements between the federal level, the federated entities, and neighbouring countries. Develop a formal mechanism to enable exchange of information and avoid gaps in response.

Strengthening preparedness

As noted previously, Belgium has a complex administrative structure. Hence when trying to design a comprehensive and coordinated structure to manage the response and accurately describe the roles and responsibilities is very difficult. For example, the roles and responsibilities of the RAG and RMG were clear but it was not clear to the assessment team what the Inter-administrative platform was for and interpretation among stakeholders were also different for this last group.

Recommendation:

- Test the structures and framework currently being put in place. A programme of simulation exercises including exercises at federated entity and national level, individually and collectively, could be developed to test the new framework and plans. These exercises need not be complex and the various tests and exercises can focus on specific points of the overall framework as it is strengthened and developed.

Identification of critical Medical Counter-Measures (MCMs)

Belgium has identified critical MCMs for preparedness and response for stockpiling and can provide access under secure circumstances. The list includes CBRN and pandemic threat-relevant MCMs and is drawn up taking into account the advice of a Belgian scientific committee. This list is not included in a legal document due to its sensitive nature.

Belgium also uses a specific list to address shortages where medicinal products can be added if there is a need to take action. There are plans to draw up a list of critical medicines based on the Union list of critical medicines once it is finalised. A system to coordinate the efforts at the federal and regional levels is being developed, particularly for PPE.

Recommendations:

- Continue the efforts to coordinate at federal and regional level the monitoring of MCMs, including stocks. Where possible, such arrangements should be detailed and documented in order to ensure a consistent implementation over time.
- In terms of lists of critical MCMs, continue the development of a specific methodology for the list of items to be included in its strategic stockpile and ensure its implementation, taking into account relevant stakeholders also at regional level where relevant.
- With regard to critical medicines that can be considered MCMs, reflect on its specific needs to ensure adequate preparedness when developing the Belgian federal list of critical medicines.

Policies or plans for monitoring supply and estimating demand of critical Medical Counter-Measures (MCMs)

Belgium has included provisions for monitoring supply and estimating demand in its General Preparedness Plan, but such provisions do not include all the relevant needs or current initiatives in this field.

Belgium is piloting a Stock Monitoring Tool project, for which the pilot phase has started on 1 November 2023. The aim of the Stock Monitoring Tool is to better anticipate and manage the risks of unavailability of medicines. The pilot phase will last one year, and an intermediate evaluation on the data will be conducted to verify the usefulness of such a tool. Marketing Authorization Holders, wholesaler distributors, community pharmacies, and hospital pharmacies are asked to provide weekly stock information for eight active ingredients. For other crisis-relevant products, Belgium is considering using another tool that will allow monitoring of information during crisis times at the federal level. Flanders has an already existing IT system that could be repurposed to collect such information also at federal level. Challenges identified for data collection include the need for better delineation of responsibilities between different administrative levels, the need to identify a system that alleviates the reporting burden for hospitals and other stakeholders, and the need for sustainable funding. Addressing all possible crises and related MCMs could also be a potential limitation.

Recommendation:

- Continue the development of tools to ensure monitoring of supply and estimating demand, taking into account the reporting requirements that would be applicable in case of a public health emergency. The relevant tools should allow to collect information for all the relevant types of products that fall under the definition of MCM. Existing provisions under the general preparedness plan or relevant policies should be revised to reflect current and future initiatives in this field. Coordination between the regional and federal level should be clarified in terms of reporting.

Provisions related to mitigating supply chain vulnerabilities or mapping of production capacities

Belgium has not yet implemented provisions related to mitigating supply chain vulnerabilities or mapping production capacities within the country. At the federal level, information could be extracted for specific medicinal products if needed. Belgium is closely following the work conducted by DG HERA, DG GROW and the Critical Medicines Alliance.

Recommendation:

- Consider including provisions related to mitigating supply chain vulnerabilities or mapping production capacities in the preparedness plan or related policies.

Provisions to scale-up manufacturing of critical Medical Counter-Measures (MCMs)

Belgium is considering implementing reservation contracts at the federal level as a measure to ensure that the manufacturing of relevant MCMs can be scaled up in a timely manner. Market research is being performed. Belgium plans to include the reservation of production capacity in future tenders for PPE. However, at the regional level, these measures were adopted during the pandemic and were not successful, so they have decided to move to a physical stock.

Recommendation:

- Continue exploring arrangements to ensure that manufacturing of crisis-relevant MCMs can be scaled up in a timely manner. This should be done in discussions with the regions, with a particular focus on the lessons learned from the pandemic.

Strategic stockpiles

Belgium has physical strategic stockpiles of countermeasures for CBRN and pandemic threats, covering different types of products. At the regional level, there are also physical stockpiles for PPE.

There are provisions in place for the procurement and distribution of the products at federal and regional levels, which can vary depending on the type of product and on whether there is an emergency. These contracts can also cover the destruction of products.

At the federal level for hospitals, and at the federated entities also for nursing homes, there are recommendations to have a buffer stock to cover a potential increase in demand associated with a health crisis. Coordination exists at federal and regional levels regarding joint procurement for the quantification of needs. The methodology to be applied at the federal level is under development based on specific threat scenarios, and relevant stakeholders are involved. Quantification is considered a challenge. At the regional level, the items included in the list are restricted to PPE and are based on past needs and complement other stocks at the EU level, for instance. Lessons learned from the pandemic are documented at the regional level but not at the federal level.

Recommendation:

- Continue developing its stockpile strategy at federal and regional level ensuring coordination and documented and detailed identification of responsibilities. Further collaboration between federal and regional level could bring an added value in the development of the methodology and estimation of quantities.

Capacity 7. Health service provision

A Hospital Transport and Surge Capacity committee was set up during the COVID-19 crisis, bringing together all the entities concerned, hospital directors, medical directors and various experts. This committee enabled very regular and precise monitoring of transport and hospital capacity. This committee is no longer active, and information gathering has therefore ceased in this precise way.

Recommendations:

- As mentioned above under Capacity 4, maintain hospital bed monitoring capacities non-emergency periods, ready to scale-up when needed. The hospital capacity reporting platform should be refined to include variables that could potentially be needed during a health emergency, so that data collection can be deployed quickly. As with other surveillance systems, this system should undergo evaluation and regular process improvement to maximise effectiveness during health emergencies.
- Ensure hospital alert and response plans are exercised regularly. Plans in the event of Ebola virus disease and other haemorrhagic fever outbreaks are well developed. Other priority health events such as chemical events could be considered for simulation exercises with the healthcare delivery sector.

Site visit

As part of the assessment mission the assessment team was given the opportunity to visit the High-Level Isolation Unit (HLIU), also called High Security Isolation Units in some countries, at the University Hospital Antwerp (UZA). This unit, designed for managing a small number of suspected and confirmed cases of high consequence infectious diseases, is housed in a self-contained building in the grounds of the UZA. The team gave a demonstration of the donning and doffing procedure needed to ensure the correct level, use and disposal of personal protective equipment in the HLIU environment. The HLIU of Antwerp University Hospital has been regularly involved in preparedness exercises in collaboration with the medical component of the Belgian Defence (responsible for patient transport in BSL3 - high-security conditions), ITM in Antwerp, and regional and federal public health authorities. 'Donning and doffing' exercises are organised on average three times a year for HLIU personnel, while 'Hand over, take over' (HOTO) exercises are conducted four times a year in collaboration with external partners.

Plans are in progress to relocate the unit into the hospital main building in a bespoke and newly developed addition to the current building. As noted, HLIU are not common across EU and EEA countries with some having no capacity and the rest having very limited capacity. Therefore, the expertise in establishing and maintaining such a capacity is rare and the Units themselves represent a critical infrastructure for the EU/EEA. While it has been attempted in the past to develop a network or a community of practice of those specialists for HLIUs in EU/EEA countries through various EU-funded initiatives, this has not been maintained in a systematic way. There remain rather ad hoc links between colleagues from different countries. Establishing a more formal network is clearly needed, especially as pandemic planning reviews are high on the agenda and having access to HLIUs is one important component of case management early in a potential pandemic.

Capacity 8. Risk communication and community engagement

A generic module in the Generic Preparedness Plan (GPP), under Phase 3 – activation, describes national risk communication and community engagement (RCCE) (Module 3.1: Public Communication). This module describes governance, roles and responsibilities of different stakeholders, target audiences and preferred communication channels to inform risk communication interventions. Mechanisms for coordination of RCCE functions and resources are implemented at the national, regional and local levels, but integration into the National Crisis Centre (NCCN) emergency response systems is not clear and have not been fully implemented nor evaluated. In situations of crisis, NCCN implements their own communication plan, not being clear how it aligns with the GPP or the intervention of the RAG, or the Risk Management Group (RMG).

Recommendation:

- Finalise, implement and test the risk communication and community engagement plan, in articulation with NCCN and other relevant stakeholders.

Capacity 9. Points of Entry (PoEs) and border health

Belgian responses in the SPAR tool indicated a solid system and processes and for PoE and border health along with IHR requirements. This included highly developed systems and processes covering a broad range of areas. All designated PoEs implement routine core capacities with link to the national surveillance system. All designated PoE have developed public health emergency plans for events caused by all hazards with link to the national emergency response plan. National multi-sectorial processes in place to adopt international travel-related measures are developed and being implemented.

The Belgian responses to the PoE and border health questions in the in the Article 7 template partly contrasted the responses in the SPAR questionnaire. Here, Belgium declared a lack of operational instruments to facilitate sharing of travel related health data and reporting to the national level. On the other hand, during the ECDC PHEPA visit it was presented that processes and procedures were indeed in place for rapid sharing on information and coordination between national and regional levels. What was found missing to assess the capacity as higher was a complete multi-hazard manual that is under development.

Recommendation:

- Further development and exercises in the area of PoE and border health, but also recognises that the area is well developed with most functions and processes in place.

Capacity 10. Zoonotic diseases and threats of environmental origin, including those due to the climate[5]

One Health Approach

In Belgium, several public authorities have a role in the prevention, preparedness and response to zoonotic and/or environmental health threats at the federal level (Federal Public Service (FPS) Health, Food Chain Safety and Environment, Federal Agency for the Safety of the Food Chain (FASFC), Sciensano, National Crisis Centre (NCCN), the Center for Risk Assessment of Climate Change (CeRAC)) and community and regional levels (Brussels Environment (BE), Vivalis Brussels, Department of Care, the Agency for Nature and Forests (ANB), Service public de Wallonie – Agriculture, Ressources Naturelles et Environnement (SPW-ARNE), Agence pour une Vie de Qualité (AVIQ), Infectious Diseases Protection Unit - Ministerium der Deutschsprachigen Gemeinschaft).

Collaboration and information sharing between the different sectors and levels takes place at national level through established groups (e.g. the working group (WG) on Zoonotic Outbreaks, the Platform Foodborne infections, the WG Ozone and Heat, the WG Exotic Mosquitoes and Other Vectors, the RAG and the Risk Assessment Group – Veterinary – Emerging Zoonoses (RAG-V-EZ)) and ad hoc consultations between relevant authorities.

The regional and federal authorities responsible for surveillance in humans and animals use established lists of infectious diseases for mandatory notification. The zoonotic diseases included within these lists can be regarded as prioritised. However, there is no agreed cross-sectoral prioritised list of zoonotic diseases for One Health surveillance purposes. The surveillance data from zoonotic diseases in humans are centralised by Sciensano, the animal data are centralised by the FASFC. For some zoonotic diseases, Sciensano is the National Reference Centre

[5] Under this capacity, it has been assessed to what extent a multi-sectoral one health approach (including public health, animal health and environmental sector) related to zoonotic diseases and threats of environmental origin (including those due to climate change), has been adopted in the national preparedness and response planning.

for both animal and human health, hence centralising laboratory data from both sectors. Animal data are shared by Sciensano with the FASFC.

The RAG-V-EZ has been established in 2023, as Belgian multidisciplinary reference group in the field of emerging zoonoses in which animal health competences shared between the federal and regional authorities play a role. The RAG-V-EZ conducts scanning and monitoring of signals on the emergence of impactful zoonoses for the Belgian epidemiological context. The group can assess and/or recommend possible responses and management options to address these events on the animal health side. The RAG-V-EZ reports to and collaborates with the RAG, one of the two permanent structures created in 2007 together with the RMG under the IHR in the event of a public health threat in Belgium. The role and constitution of the RAG and RMG are established through a protocol agreement (2018) between the Belgian health authorities in the public health sector.

Guidelines on the procedures to follow for the public on finding sick and/or dead wild birds and other animals have been developed and published by the different competent authorities. In practice, municipalities are the first contact point for the population regarding management of dead animals on private properties but there is no specific legislation formalising this role. There is informal consultation and alignment between the different authorities on risk communication related to zoonotic diseases to the public and professional audiences. When available, this is based on assessments of the RAG and RAG-V-EZ, and measures decided by the RMG. For impactful outbreaks, the Inter Federal Crisis Communication Network (coordinated by the SPF Health and including federal and regional authorities) has a coordinating role to align risk communication messages and press releases.

Several academic institutes organise One Health training courses (e.g. MSc or summer schools). No specific and sustained joint training programmes for One Health professionals have been developed by the Belgian authorities. One Health simulation exercises have been conducted on foodborne outbreaks but not for other zoonotic diseases.

The GPP was established in December 2023, through multi-sectoral collaboration of the federal and regional authorities. As part of the VOP, a module on zoonotic diseases (including a draft proposed multi-sectoral & multi-level crisis governance model for zoonotic disease threats) and a module on vector transmission, which will integrate a One Health approach, are currently under development (Level 2).

The Belgian PREZODE Expert Group submitted its policy recommendations for a Belgian One World One Health Vision Towards Prevention of Zoonotic Disease Emergence to ministers in November 2023. These include recommendations related to establishing a One World One Health governance at Belgian level, elaborating a national action plan, establishing integrated monitoring & surveillance programmes, and developing a One World One Health socio-educative programme. Ministers gave a mandate to study options for implementation of the recommendations at national level.

The federal and regional authorities involved in the preparedness and response to zoonotic and environmental health threats cooperate according to their legal mandate (e.g. for surveillance, risk assessment, risk management and risk communication). However, when it comes to implementing a One Health approach, the responsibilities are fragmented and not always clear, the decision-making is complex and certain gaps have been identified. No formalised One Health governance (e.g. through legislation, policies, collaboration agreements or protocols) between the animal health, public health and environmental sectors has been established and there are no formal mechanisms for information sharing (Level 2).

The RAG and the RAG-V-EZ collaborate on risk assessments on zoonotic diseases from the human and animal health perspectives. This has not been formalised through a joint mandate or collaboration mechanism. In addition, there is no formal decision-making body like the RMG or the Inter-Ministerial Conference Public Health for implementing prevention and control measures in a One Health approach in the public and animal health sectors. At this stage, there is no alignment between the activities of the PREZODE Network and the RAG, RAG-V-EZ or RMG. The policy recommendations towards prevention of zoonotic Disease Emergence from the PREZODE Network have not yet been implemented by the Belgian authorities since a feasibility study is currently underway. As a next step, an MoU on the prevention on the emergence of zoonotic disease in priority Belgian socio-economic sectors is envisaged to be submitted to the new governments.

Provisions related to the effects of climate change on zoonotic diseases or related to impacts of extreme weather events on public health

The National Environment Health Action Plan (NEHAP) established by the various federal and regional authorities responsible for the environment or health in Belgium to jointly tackle the problems surrounding environmental health, includes provisions related to adaptation to the effects of climate change on health in Belgium, ozone & heat, and exotic mosquitoes (including the MEMO+ project on the monitoring of Aedes albopictus) and other vectors such as ticks.

The Flemish Climate Health Plan is a response to the international call of WHO to take responsibility and work on a proactive health policy, with climate as a direct risk factor for public health. The plan develops a long-term vision, it

maps out what is needed to limit the health effects of climate change and lists existing initiatives. The plan includes provisions related to e.g. heat stress, infectious diseases, emerging pathogens, weather changes and extremes.

The National Ozon & Heat plan aims to anticipate the emergence of heat and ozone peaks and proactively determine the measures to prevent and limit their effects on health. It is based on a coordination protocol and complemented by concrete tasks and operating procedures for the involved federal and regional authorities.

The Center for Risk Assessment of Climate Change (CeRAC) evaluates risks for Belgium from a national security perspective and advises policy-makers on strategies for increased resilience and adaptation.

A study commissioned by the FPS Health has examined the effects of climate change on the healthcare system. This includes extreme weather events, food-and waterborne diseases and vector borne diseases. The abovementioned action plans consider some of the recommendations from the study, but no specific plan related to this study is in place.

No specific provisions related to the effects of climate change on zoonotic diseases or related to impacts of extreme weather events on public health have been included in the GPP.

Recommendations:

- Establish a cross-sectoral prioritised list of zoonotic diseases for One Health surveillance and further integrate surveillance of priority zoonotic diseases and data-sharing mechanisms across sectors.
- Establish a formalised One Health governance for prevention, preparedness and response to zoonotic and environmental health threats between the animal health, public health, and environmental sectors from the federal and regional levels, including responsibilities, mechanisms for information sharing and decision-making, allocation of resources and further integration of surveillance, risk assessment, risk management and risk communication activities. The proposed draft multi-sectoral & multi-level crisis governance model for zoonotic disease and the policy recommendations from the Belgian PREZODE Expert Group can be used as a basis.
- Finalise the modules on zoonotic diseases and vector transmission currently under development as part of the Viral Outbreak Plan complementing the GPP.
- Refer to the relevant existing plans related to climate change and environmental health (e.g. NEHAP, Flemish Climate Health Plan, the Ozone & Heat plan) in the GPP, and ensure alignment by detailing how these plans relate to one another.
- Consider organising cross-sectoral simulation exercises for zoonotic priority pathogens (other than foodborne pathogens) and joint training programmes for One Health professionals (animal health, public health, and environmental sector) related to preparedness and response to zoonotic diseases.

Capacity 11. Chemical events

The questions relating to chemical events consider three areas, the response to larger scale chemical releases both accidental and deliberate, health risk assessments of chemical threats as well as surveillance for chemical intoxication in individuals and small groups.

Belgium has successfully responded to several large-scale accidental chemical releases in the past, has indicated that plans are in place at major hazard sites and the coordinating role of the NCCN, which includes a CBRNe centre, is well described and understood by those responding to PH emergencies in Belgium. This includes at the operational level, a multidisciplinary team doing the initial risk assessment. The draft CBRN plan being prepared by DG preparedness and response, once finalised, will be a valuable plan to inform the Public Health response to chemical incidents, complementing what already exists. This includes the establishment of a CBRNe expert advisory group which will support the RAG in developing a specific health risk assessment if required. Lists of experts that can be invited to join this CBRNe expert group are being developed.

For surveillance of intoxication/poisoning either accidentally or deliberately, Belgium relies on frontline health professionals or the Belgian poison control centre to identify unusual poisoning events in the population. While the poison control centre is identified in the draft CBRN medical response plan as a possible CBRN signal detection channel, how this will work operationally needs to be more clearly explained in the plan as it is further developed. Awareness raising among frontline medical staff and training of this workforce should also be considered once the plan is completed. The most robust solution would be to implement intoxication syndromes as part of syndromic surveillance but there might be many reasons why this would be challenging.

Recommendation:

- Consider the feasibility of including intoxication syndrome(s) as part of the syndromic surveillance system.

Capacity 12. Antimicrobial resistance and healthcare-associated infections

Belgium has implemented the National Action Plan on Antimicrobial Resistance (NAP-AMR) including a detailed operational plan and is currently developing its NAP-AMR 2025–2029. The current NAP-AMR has incorporated the One Health approach with significant actions in the human, animal and environmental sectors. The BELMAP One Health report provides a comprehensive summary of trends in antimicrobial consumption (AMC) and antimicrobial resistance (AMR) in humans and food-producing animals in Belgium, providing a robust foundation for AMC and AMR monitoring across sectors. However, transversal One Health activities, communication and knowledge sharing across sectors are limited. The absence of a monitoring and evaluation framework linked to the NAP-AMR hinders understanding of the impact and further development of implemented actions.

Since 1999, the cross-sectorial Belgian Antibiotic Policy Coordination Committee (BAPCOC) has been in place with the overarching aim of promoting rational AMC and tackling the rise of AMR. BAPCOC coordinates information-sharing to guide AMR and HAI policies and interventions, including the development and implementation of the NAP-AMR. There is an open procedure for proposing actions, and all relevant stakeholders are consulted in a non-hierarchical manner. However, the governance and decision-making process for the NAP-AMR, which should include stakeholders from all relevant federal and federated entities, need to be formalised.

Belgium has a long-standing history of high-quality surveillance systems for AMC, AMR and healthcare-associated infections (HAIs), coordinated at the federal level by Sciensano. Belgium reports data on AMC and AMR to ECDC on a yearly basis and has participated in recurrent point prevalence survey for HAIs since 2011.

There is an overall high level of awareness of AMR among healthcare providers and the general public. A recent Eurobarometer survey indicated that the population in Belgium is more knowledgeable about antibiotics than the average EU/EEA population. However, translation of awareness into clinical practice and prudent use at the community level remains challenging. Awareness raising campaigns have been a strong point of the Belgian policy for tackling AMR. Targeted, multifaceted behaviour change interventions should be considered as an effective tool to bridge the gap between knowledge and practice. Electronic prescribing has allowed for generalists to receive feedback on their prescribing via an online 'barometer', and financial incentives are in place to encourage prescribers to contribute their electronic prescribing data. The 'Access, Watch, Reserve (AWaRe) classification of antibiotics for evaluation and monitoring of use'[6], a WHO tool to support antibiotic stewardship efforts at local and national level, is not yet integrated into communication about AMC in Belgium.

Belgium is taking steps to strengthen its capabilities for managing multidrug-resistant organism (MDRO) outbreaks through federal and federated entity initiatives such as the Hospital Outbreak Support Team (HOST) and the Outbreak Support Team (OST). Furthermore, federated entities recognise the need to include *Candida auris* on their respective lists of notifiable diseases. MDROs are notifiable if two epidemiologically linked cases are identified, but further elaboration on which MDROs are prioritised for action is needed.

BAPCOC is responsible for appointing working groups that address infection prevention and control (IPC) which are well-established structures for information-sharing and coordination in the human sector. However, these working groups are insufficient to serve as national programmes. Currently, hospital-level IPC activities are coordinated, on a voluntary basis, by a working group at FPS Public Health.

Recommendations:

Development of the One Health National Action Plan on Antimicrobial Resistance (NAP-AMR), 2025–2029

- Establish formalised decision-making processes that will facilitate the many decisions that must be made by diverse stakeholders when formulating the NAP-AMR. Consider existing group decision-making models. The group decision-making model should be inclusive, considering input from all participants, yet enable the NAP coordinating body to determine national priorities that might not completely reflect the priorities of participating bodies. The formalised process should also ensure that federated entities are involved early in discussions about indicators, targets, and actions to be included in the NAP.
- Highlight the transversal, One Health aspects of the NAP-AMR. ECDC supports the initiative to include targets in the new NAP-AMR. These targets should address the identified gaps, be based on indicators that are easy to monitor, and be accepted by stakeholders for being achievable in the determined timeframe. Consider aligning with existing targets (e.g. Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach). Connecting actions to targets helps organise the operational plan and supports communication of the objectives.

[6] Available at: https://www.who.int/publications/i/item/WHO-MHP-HPS-EML-2023.04

- Integrate monitoring and evaluation into the NAP-AMR to measure successes and identify areas for improvement. Monitoring implementation of the NAP-AMR can inform stakeholders about the status of the operational plan and progress towards the targets. Evaluation of NAP-AMR implementation can provide evidence for effectiveness of interventions and lead to improvements in future actions against AMR.

Antimicrobial consumption (AMC): Bridging the gap between awareness and action

- Continue developing interventions aimed at improving antibiotic prescribing and antibiotic use behaviours. Examples include expansion of electronic prescribing, including integrated clinical decision support systems for providers; limiting antibiotic dispensing at pharmacies to prescribed amounts; and strengthening prescriber audit and feedback programs such as the antibiotic barometer project.
- ECDC encourages the integration of the 'WHO AWaRe classification of antibiotics for evaluation and monitoring of use'[7] into national discussions on AMC. If the AWaRe classification's usefulness has been limited in Belgium's primary care sector, consider its usefulness for monitoring and evaluation of antibiotic use in the hospital and long-term care sectors.

Antimicrobial resistance (AMR): Priority Multidrug-resistant Organisms (MDROs) for rapid detection and response

- Identify high-priority MDROs and clarify processes for notification. Determination of high-priority MDROs is needed to clarify which MDROs require immediate action by IPC personnel and outbreak support teams, now that 'MDRO outbreaks' are added to the federated entities' lists of notifiable diseases.
  - To determine priority MDROs, consult local or national epidemiology and data regarding the impact of outbreaks. Identify where rapid deployment of outbreak support teams might be needed to assist with containment and control measures. Consider consulting the framework in the WHO bacterial priority pathogens list, 2024[8]. Non-bacterial pathogens should also be considered, e.g. *Candida auris* has *de facto* been identified as a priority given a single case is notifiable. Consider which phenotypes, genotypes, and AMR mechanisms are the most important for early identification to prevent their spread in the hospital and long-term care sectors.
  - Leverage existing infrastructure for laboratory identification and channels for notifying public health authorities. Consider the WHO Global Antimicrobial Resistance and Use Surveillance System (GLASS) Emerging Antimicrobial Resistance Reporting Framework[9].
- Evaluate systems for rapid detection, notification, and response to priority MDROs to inform where improvements should be made. Examples of indicators for monitoring and evaluation include laboratory testing capabilities and notification time, number of detected priority MDROs, number of detected outbreaks and size of the outbreaks, and number of performed screening tests to detect MDRO carriage (and percent positivity).

Healthcare-associated infections (HAIs) and infection prevention and control (IPC): a national programme to lead IPC actions

- To strengthen the data-driven HAI prevention efforts of the BAPCOC working groups, establish a National IPC Programme to coordinate actions that target priority HAIs based on national data. This programme should have the responsibility of identifying gaps in IPC at national level and coordinating interventions to close those gaps.
- ECDC supports the implementation of interventions that will change IPC behaviour (e.g. changes in the built environment that contribute to reducing HAIs, IPC bundles, audit and feedback). Evaluate these interventions for effectiveness and share findings with IPC stakeholders to increase their impact.

[7] AWaRe classification of antibiotics for evaluation and monitoring of use, 2023 (who.int)
[8] WHO bacterial priority pathogens list, 2024: Bacterial pathogens of public health importance to guide research, development and strategies to prevent and control antimicrobial resistance
[9] GLASS Emerging antimicrobial resistance reporting framework (GLASS-EAR) (who.int)

Capacity 13. Union level coordination and support functions

In Belgium, the coordination at national-EU interface is carried out by the FPS Health, Food Chain Safety and Environment, more specifically in the newly established DG on preparedness and response. The setup of these new DG was perceived during the assessment as an effort to improve coordination of and actions on prevention, preparedness and response planning.

The Health Security Committee (HSC) representative is the president of the Board of Directors of the FPS Health, Food Chain Safety and Environment and supports the coordination and flow of information at national-EU interface. The FPS Health, Food Chain Safety and the Environment shares the information of the HSC with the relevant working groups including RMG. In the Report on EU/EEA countries' Prevention, Preparedness and Response Planning 2023 (under Article 7 of the SCBTH), Belgium provided recent examples of coordination with such working groups which were confirmed during the assessment. The outputs of both the HSC and the ECDC were proven to be shared and used among major crisis boards. For example, the opinion of HSC for a common EU approach in response to the COVID-19 situation in China was thoroughly discussed, various operational conclusions of the IPCR round tables were adopted and ECDC recommendations were integrated in the national risk assessments of the RAG. Support from the EU Health Task Force (EUHTF) has also been requested.

The coordination between the HSC representative of Belgium and national and regional stakeholders seems to work, and guidance and advice from the EU level can be incorporated in national preparedness and response efforts, however, there seems to be no specific operational basis and improvements can be made. The sharing of information remains a complex exercise in Belgium given the multitude of players involved in prevention, preparedness and response in the country. It was noted that it is intended to complement the GPP with operational modules, which will potentially facilitate the formalisation of such coordination. Structural exchanges with federated entities have been organised regularly in the context of the preparation of the General Preparedness Plan. During the assessment, these structural exchanges were also reported to be useful in the context of improving coordination. The formalisation of these regular structural exchanges might therefore be suitable to further strengthen coordination and exchange of information in a sustainable way.

The GPP also includes a module on structures and actors (Module 2.0) which defines roles and responsibilities of stakeholders at EU level. The mapping should be altered to reflect current roles and mandates of DG SANTE, ECDC and DG HERA. The SCBTH provides a strong Health Security Framework and opportunities to strengthen prevention, preparedness and response planning at national level. The GPP also has a dedicated module on the sharing of information (Module 1.4). It defines roles and responsibilities. A medical guard in the DG preparedness and response is operational. The SOP of the medical guard includes provisions for reporting to/from and coordination between EU and national level. The SOP is currently being revised and updated. During the assessment, it was specified the Chief Medical Office of DG P&R ensures permanency on call. The DG preparedness and response ensures permanent monitoring of EWRS/IHR notifications and emails.

Recommendations:

- Continue working on the GPP and include operational aspects of coordination with the European Commission, including the HSC, and ECDC.
- Ensure sharing of information from the EU level with all dedicated entities and bodies.
- Formalise regular structural exchanges with federated entities to sustainably enhance coordination and exchange of information.
- Reflect changes in EU legislation and mandates and link with the Union plan when ready.

Capacity 14. Research development and evaluations to inform and accelerate emergency preparedness

Belgium has a strong research community, from academia to public health authorities, which is highly engaged in a wide range of pandemic preparedness and outbreak response research. However, the national GPP does not address the need to ensure a coordinated and coherent approach to research and innovation in the specific context of an emergency. It could be useful to establish a process for identifying research priorities in an emergency context and ensure alignment with the public health needs. Ideally, this process should also anticipate the timely mobilisation of the necessary financial resources. Coordination and collaboration between academia and the public health institutions, including both the risk assessment and risk management structures, needs to be ensured to support an efficient and targeted evidence-based public health decision-making process.

Belgian researchers are well connected with other Member States through European initiatives (e.g. in the area of modelling and forecasting or clinical trial networks). For the clinical research in particular, Belgium reported on the procedures in place for rapid site accreditation and expedited assessments of clinical trials in case of a public health emergency. However, it is less clear in how far these procedures support a coordinated approach to avoid fragmentation of clinical research initiatives across the country. Moreover, the use of pre-approved study protocols

or operational instruments for rapid ethical clearance and data-sharing would be beneficial to support a timely and coherent research response in case of a public health emergency.

Recommendations:

- Map stakeholders relevant for preparedness and response related research in both academia and public health institutions.
- Formalise the integration of research in emergency preparedness and response activities in the general preparedness plan, such as defining research priorities in support of public health needs, mobilising research funding in a coordinated and timely manner, defining processes to streamline clinical research activities to avoid fragmentation and to enable a rapid response (e.g. pre-approved protocols or data-sharing agreements), supporting research to policy exchange, etc.

Capacity 15. Recovery elements

Recovery is divided over two chapters in the GPP. Module 3.6 (return to normality) of the GPP describes what needs to be done to stand down the response phase in order to return to normal working, as well as what needs to remain in place to continue to monitor the situation. Phase 4 (restoration) describes the processes that need to be undertaken to review the response, update the plan and implement a training and exercise programme.

It is clear that public health in Belgium has implemented a number of reviews of the response both to COVID-19 and other outbreaks (e.g. mpox) as evidenced by the reports provided. Examples from both federal and regional entity levels were described during the meeting confirming that reviews occur at national and federated entity levels. The after-action review (AAR) process is not described in detail in the documents provided so it is not clear if a consistent methodology is followed, but actionable lessons identified are generated. However, the fact that AARs have been conducted for mpox as well as COVID-19 suggests that there is a recognition, at least within FPS, of the importance of conducting review processes after outbreaks beyond COVID-19.

Recommendation:

- Emphasise in any update of the GPP Phase 4 restoration chapter that AARs are an essential part of the recovery process in any outbreak where a response has been activated. Furthermore, apply a consistent approach to AARs based on published methodologies adapted at all levels.

Capacity 16. Actions taken to improve gaps found in the implementation of prevention, preparedness, and response plans

In terms of implementation of response plans, reports from exercises were provided as part of the documentary review (e.g. a report produced by WHO on Belgium's participation in the Jade exercise, an annual IHR simulation exercise), and as noted above AARs have been conducted as a key part of the recovery process to identify lessons both from COVID-19 and mpox. In addition, an independent review was conducted by the Organisation for Economic Co-operation and Development (OECD) and the report published in 2023.

However, there appears to be no systematic and coordinated approach to compile all the lessons identified through the different processes, AARs, simulation exercises and other reviews into a national action plan or equivalent system. As a result, there is also no obvious system of prioritisation or monitoring of implementation.

Recommendation:

- Collating, prioritising and planning the implementation of the actions described in this report, if the recommendations are accepted, is the next step described in Article 8 of the SCBTH regulation. Doing this will provide Belgium with the opportunity to implement a methodological approach, converting lessons identified into lessons learned.

Conclusions

Belgium has a relatively complex federated structure. These types of structures invariably add an extra layer of complexity to achieving successful prevention preparedness and response planning in any sector. It was therefore considered very positive that both federal and federated entities were well represented at all the key sessions throughout the week of the face-to-face element of the assessment. This added value to the assessment in bringing together stakeholders was also recognised by the participants, triggering discussions that they rarely get to have. This collaborative environment and the associated informed and comprehensive discussion of the areas enabled a clear view of current preparedness by the assessment team. This in turn has led to a number of recommendations proposed by the assessment team that are seen as concrete steps to improve public health preparedness in Belgium.

There was a general sense that the levels indicated by Belgium in the Report on EU/EEA countries' Prevention, Preparedness and Response Planning 2023 (under Article 7 CBTH) in a number of questions were lower in the self-assessment than the observations made during the assessment. This might have been due in part to the complexity of federal entities but also the newness of the process and the time taken to fully bed in and understand exactly what is being asked for.

Finally, for several capacities we observed that there was some kind of communication and coordination process between different sectors and between the regional and federal levels. This did not seem to be supported by a formal SOP, agreement or process that facilitated this coordination and exchange, but nevertheless seemed to work well on an informal personal basis. The alignment with plans currently in draft at the federal level should address this.

Annex 1. List of capacities included in the assessment

Capacity 1.	IHR implementation and coordination
Capacity 1a.	*Policy, legal and normative instruments to implement IHR*
Capacity 1b.	*IHR Coordination, National IHR Focal Point functions and advocacy (SPAR)*
Capacity 2.	Financing
Capacity 3.	Laboratory
Capacity 4.	Surveillance
Capacity 5.	Human resources
Capacity 6.	Health emergency management
Capacity 6a.	*Management of health emergency response*
Capacity 6b.	*Emergency logistics and supply chain 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 (HAIs)
Capacity 12a.	*Antimicrobial resistance (AMR)*
Capacity 12b.	*Healthcare-associated infections (HAIs)*
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

This document aims at describing the main practical arrangements of the assessment mission regarding the ECDC Public Health Emergency Preparedness Assessments (under Article 8 of the SCBTH regulation).

The arrangement refers to the country visit to Belgium that took place in Brussels from 13 to 17 May 2024.

Country focal point
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Assessment team and national experts

Assessment team

The experts involved in this assessment are detailed in the table below.

Members of the assessment team			
Name	**Institution (ECDC/WHO/EU agencies and bodies, Commission services, other countries..)**	**Role in the team (team leader/expert)**	**Main in-depth capacity to assess**
Thomas Hofmann	ECDC	Team leader	-
Daniel Palm	ECDC	Expert	Laboratory
Carlos Carvalho	ECDC	Expert	Surveillance
Paul Riley	ECDC	Expert	Health emergency management
Vicky Lefevre	ECDC	Expert	Zoonotic diseases and environmental threats
Adriana Romani	ECDC	Expert	Zoonotic diseases and environmental threats
Vivian Leung	ECDC	Expert	AMR/HAIs
Anna Machowska	ECDC	Expert	AMR/HAIs
Petronille Bogaert	DG SANTE B2	Expert	Union level coordination and support functions
Sebastiano Lustig	DG HERA	Expert	Health emergency management – Emergency logistics and supply chain management
Ana Burgos Gutierrez	DG HERA	Expert	Health emergency management – Emergency logistics and supply chain management
Evelyn Depoortere	DG RTD	Expert	Research development
Sébastien Français	EU/EEA country expert (Luxembourg)	Expert	Health emergency management

Country experts participating in the assessment process

The table below present the names and area of expertise of the experts from the assessed country involved in the assessment process.

Members of the assessment team			
Name	**National institution**	**Role in the assessment**	**Main capacity**
Bart Hoorelbeke	FPS Public Health	Moderator	Laboratory/Surveillance
Koen Blot	Sciensano	Moderator	Laboratory/Surveillance
Arnaud Capron	Sciensano	Expert	Laboratory/Surveillance
Steven Van Gucht	Sciensano	Expert	Laboratory/Surveillance
Koen Blot	Sciensano	Expert	Laboratory/Surveillance
Jorgen Stassijns	Sciensano	Expert	Laboratory/Surveillance
Nathalie Bossuyt	Sciensano	Expert	Laboratory/Surveillance
Pieter Geentjens	RIZIV	Expert	Laboratory/Surveillance
Angel Rosas	AViQ	Expert	Laboratory/Surveillance
Dominique Ngoumtsa	AViQ	Expert	Laboratory/Surveillance
Ludovic Sablon	AViQ	Expert	Laboratory/Surveillance
Veronica Jaramillo Amezquita	Vivalis	Expert	Laboratory/Surveillance
Adrae Taame	Vivalis	Expert	Laboratory/Surveillance
Stéphanie Sirjacobs	Vivalis	Expert	Laboratory/Surveillance
Guido Jost	OstBelgien	Expert	Laboratory/Surveillance
Anne Doum	OstBelgien	Expert	Laboratory/Surveillance
Naïma Hammami	Department of Care	Expert	Laboratory/Surveillance
Patrick Smits	Department of Care	Expert	Laboratory/Surveillance
Lara De Mets	FPS Public Health	Moderator	Health emergency management
Bertrand Draguez	FPS Public Health	Moderator	Health emergency management
Stéphanie Mali	FPS Public Health	Moderator	Health emergency management
Eva Van Eeckhout	FPS Public Health	Expert	Health emergency management
Sarah Cordero	FPS Public Health	Expert	Health emergency management
Jorgen Stassijns	Sciensano	Expert	Health emergency management
Eveline Cleynen	Sciensano	Expert	Health emergency management
Hans De Neef	NCCN	Expert	Health emergency management
Sanne Vandromme	NCCN	Expert	Health emergency management
Patrick Smits	Department of Care	Expert	Health emergency management
Liesbeth Van Gestel	Department of Care	Expert	Health emergency management
Marjolijn Sansen	Department of Care	Expert	Health emergency management
Brigitte Bouton	AViQ	Expert	Health emergency management
Sebastien Morel	AViQ	Expert	Health emergency management

Members of the assessment team			
Clemence Lebrun	Vivalis	Expert	Health emergency management
Guido Jost	OstBelgien	Expert	Health emergency management
Anne Doum	OstBelgien	Expert	Health emergency management
Sybille Schotte	FAGG	Expert	Health emergency management
Gauthier Willemse	FPS Public Health	Moderator	Zoonotic diseases and environmental threats
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Tinne Lernout	Sciensano	Expert	Zoonotic diseases and environmental threats
Jorgen Stassijns	Sciensano	Expert	Zoonotic diseases and environmental threats
Eveline Cleynen	Sciensano	Expert	Zoonotic diseases and environmental threats
Pieter Depoorter	FAVV	Expert	Zoonotic diseases and environmental threats
Axel Mauroy	FAVV	Expert	Zoonotic diseases and environmental threats
Muriel Vervaeke	Agentschap Natuur en Bos	Expert	Zoonotic diseases and environmental threats
Wouter Dhaeze	Department of Care	Expert	Zoonotic diseases and environmental threats
Lieze Rouffaer	Leefmilieu Brussel	Expert	Zoonotic diseases and environmental threats
Cyrelle Houtsaeger	Leefmilieu Brussel	Expert	Zoonotic diseases and environmental threats
Valérie De Waele	SPW Wallonie	Expert	Zoonotic diseases and environmental threats
Alain Licoppe	SPW Wallonie	Expert	Zoonotic diseases and environmental threats
Natacha Purnelle	AViQ	Expert	Zoonotic diseases and environmental threats
Caroline Boulouffe	AViQ	Expert	Zoonotic diseases and environmental threats
Estelle Embrechts	AViQ	Expert	Zoonotic diseases and environmental threats
Sylvie Leenen	AViQ	Expert	Zoonotic diseases and environmental threats
Maude Istas	FPS Public Health	Expert	Zoonotic diseases and environmental threats
Marielle Smeets	FPS Public Health/DG Environment	Expert	Zoonotic diseases and environmental threats
Manon Hupin	FPS Public Health	Expert	Zoonotic diseases and environmental threats
Katrien Tersago	Department of Care – Flanders – environment	Expert	Zoonotic diseases and environmental threats
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Alessandro Pellegrino	AViQ	Expert	Zoonotic diseases and environmental threats
Thomas Janssens	FPS Public Health	Moderator	AMR/HAIs
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Katie Vermeersch	FPS Public Health	Expert	AMR/HAIs
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Katrien Latour	Sciensano	Expert	AMR/HAIs

Members of the assessment team			
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Karl Mertens	Sciensano	Expert	AMR/HAIs
Jean-Francois Leonard	AViQ	Expert	AMR/HAIs
Emilie Coppens	Vivalis	Expert	AMR/HAIs
Wouter Dhaeze	Department of Care	Expert	AMR/HAIs
Sarah De Clercq	FAGG	Expert	AMR/HAIs
Karim Tamseddak	FAGG	Expert	AMR/HAIs
Lies Grypdonck	RIZIV	Expert	AMR/HAIs
Fabiana Dal Pozzo	AMCRA	Expert	AMR/HAIs
Dirk Ramaekers	FPS Public Health	Expert	Union level coordination and support functions
Franck Limonier	Sciensano	Expert	Chemical events
Jan Beeldens	Civil Protection	Expert	Chemical events
Gerlant Van Berlaer	FPS Public Health	Expert	Research development
Niel Hens	Hasselt University	Expert	Research development
Toon Braeye	Sciensano	Expert	Research development
Erika Vlieghe	University of Antwerp/ Antwerp University Hospital	Expert	Research development/ Health Service Provision
Pierre Van Damme	University of Antwerp	Expert	Research development
Emmanuel André	KU Leuven	Expert	Research development
Leen Debeuf	FPS Public Health	Expert	Points of Entry and border health
Nyota Kalimira	FPS Public Health	Expert	Points of Entry and border health
Marcel Van der Auwera	FPS Public Health	Expert	Points of Entry and border health
Manon Hupin	FPS Public Health	Expert	Risk communication and community engagement
Vinciane Charlier	FPS Public Health	Expert	Risk communication and community engagement
Marcel Van der Auwera	FPS Public Health	Expert	Health Service Provision
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Annelies Mondelaers	Antwerp University Hospital	Expert	Health Service Provision
Koen Vanden Driessche	Antwerp University Hospital	Expert	Health Service Provision
Nicole Knops	Antwerp University Hospital	Expert	Health Service Provision

Agenda for the in-country visit

	Monday	Tuesday	Wednesday	Thursday	Friday
08:30	Welcome & Registration	Registration	Registration	Registration	
09:00					
09:30	Opening Remarks (Dirk Ramaekers and Bertrand Draguez - FPS Public Health, Thomas Hoffman - ECDC)	Assessment of In-Depth Capacities	Assessment of In-Depth Capacities	Capacity 13: Union level coordination and support functions (Dirk Ramaekers, FPS Public Health)	
10:00	Stakeholder Introductions (Bart Hoorelbeke - FPS Public Health)			Capacity 11: Chemical events (Franck Limonier, Sciensano & Jan Beeldens, Civil Protection)	
10:30	Break				Registration
11:00	Country Presentation (Gauthier Willemse and Lara De Mets - FPS Public Health)	Break	Break	Break	Main Findings and Conclusions (Thomas Hoffman - ECDC)
11:30	Regional Entity Presentation: Flanders, Brussels and Ostbelgien (Patrick Smits - Departement Zorg, Stephanie Sirjacobs - Vivalis, Guido Jost - DGOV)	Assessment of In-Depth Capacities	Assessment of In-Depth Capacities	Capacity 14: Research development and evaluation - Overview (G. Van Berlaer, FPS Public Health) - Modelling (Niel Hens, U Hasselt & Toon Braeye, Sciensano) - Clinical Microbiology & Outbreak Response (Emmanuel André, KU Leuven, Pierre Van Damme, University of Antwerp, Erika Vlieghe, University of Antwerp)	Recommendations and Next Steps
12:00					Debrief on the ECDC Pilot (structure, preparation, organization)
12:30	National Institute of Health Presentation: Sciensano (Christian Leonard - Sciensano)		Lunch		
13:00	Lunch	Lunch		Lunch	Lunch
13:30			On site visit: HLIU - Antwerp		
14:00	Regional Entity Presentation: Wallonia (Brigitte Bouton - AViQ - online)	Assessment of In-Depth Capacities		Capacity 9: Points of Entry and border health (Leen Debeuf, Saniport, FPS Public Health)	Concluding Remarks (Bertrand Draguez - FPS Public Health)
14:30	Assessment of Cross-Cutting Aspects of the 5 in-depth Capacities. (Co-chair: Bart Hoorelbeke, FPS Public Health)			Capacity 8: Risk Communication and community engagement (Manon Hupin, FPS Health)	
15:00				Capacity 5&7: Human resources and Health Service Provision (Marcel Van der Auwera, FPS Health, TBC)	
15:30	Break	Break		Break	
16:00	Assessment of Cross-Cutting Aspects of the 5 in-depth Capacities. (Co-chair: Bart Hoorelbeke, FPS Public Health)	Assessment of In-Depth Capacities		Additional capacities - discussion with P&R team	
16:30					
17:00				Wrap-up internally ECDC assessment team - Day 4	
17:30	Wrap-up internally ECDC-assessment team - Day 1	Wrap-up internally ECDC-assessment team - Day 2	Wrap-up internally ECDC-assessment team - Day 3		
18:00	Wrap-up Day 1 (Thomas Hoffman - ECDC, Bart Hoorelbeke - FPS Public Health)	Wrap-up Day 2 (Thomas Hoffman - ECDC, Bertrand Draguez - FPS Public Health)	Wrap-up Day 3 (Thomas Hoffman - ECDC, Lara De Mets - FPS Public Health)		
18:15					

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