

ECDC **CORPORATE**



Consolidated annual activity report

2022

ECDC CORPORATE REPORT

Consolidated Annual Activity Report 2022



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Abbreviations

ABAC	Accrual-Based Accounting (European Commission integrated budgetary and accounting system)
ABB	Activity-Based Budgeting
ABC	Activity-Based Costing
AD	'Administrator' Function Group
AF	Advisory Forum
AMC	Antimicrobial consumption
AMR	Antimicrobial resistance
APHEA	Agency for Public Health Education Accreditation
APHL	Association of Public Health Laboratories
ARHAI	Antimicrobial resistance and healthcare-associated infections
ASPHER	Association of Schools of Public Health in the European Region
AST	'Assistant' Function Group
BIP	Business impact
BREEAM	Building Research Establishment Environmental Assessment Method
CA	Contract agent
CAAR	Consolidated Annual Activity Report
CAF	Common Assessment Framework
CCB	Coordinating Competent Body
CDC	US Centers for Disease Control and Prevention
CDTR	Communicable disease threats reports
COVID-19	Coronavirus disease 2019
CPCG	Committee on procurement, contracts and grants
CPDP	ECDC Continuous Professional Development Programme
DCG	Director Consultation Group
DG ECHO	Directorate General for European Civil Protection and Humanitarian Aid Operations
DG INTPA	Directorate-General for International Partnerships
DG NEAR	Directorate-General for Neighbourhood and Enlargement Negotiations
DG RTD	Directorate-General for Research and Innovation
DG SANTE	Directorate-General for Health and Food Safety
DMS	Document Management System
DPO	Data protection officer
DTS	Digital Transformation Services
E3	European Environment and Epidemiology Network
EAAD	European Antibiotic Awareness Day
EACCME	European Accreditation Council for Continuing Medical Education
EAP	EPIET-Associated Programme
EARS-Net	European Antimicrobial Resistance Surveillance Network
ECED	ECDC Candidate Expert Directory
ECMP	Enterprise Content Management Platform
EEA	European Environment Agency
EEA/EFTA	European Economic Area/European Free Trade Association
EEAS	European External Action Service
EFGS	European Federation Gateway Service
EFSA	European Food Safety Authority
EHDS	European Health Data Space
EHFG	European Health Forum, Gastein
eIIS	Electronic Immunisation Information Systems
EIOS	Epidemic Intelligence from Open Source
ELDSNet	European Legionnaires' Disease Surveillance Network
ELITE	European Listeria Typing Exercise
EMA	European Medicines Agency
EMAS	EU Eco-Management and Audit Scheme
EMC	European Medical Corps
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ENI	European Neighbourhood Instrument
ENP	European Neighbourhood Policy
ENVI	Committee on the Environment, Public Health and Food Safety of the European Parliament
EOC	Emergency Operations Centre

EOHSP	European Observatory on Health Services and Policies
EPHESUS	Evaluation of European Union/European Economic Area Public Health Surveillance Systems
EPIET	Epidemiology path of the ECDC Fellowship programme
EpiNorth	Co-operation project for communicable disease control in northern Europe
EpiPulse	European surveillance portal for infectious diseases
ePLF	Passenger Locator Form exchange platform
EPRS	Emergency Preparedness and Response Support
EQA	External quality assessment
ERLI-Net	European Reference Laboratory Network for Human Influenza
ESAC-Net	European Surveillance of Antimicrobial Consumption Network
ESCAIDE	European Scientific Conference on Applied Infectious Disease Epidemiology
ESF	European Social Fund
EU	European Union
EU-ANSA	EU Agencies Network on Scientific Advice
EUCAST	European Committee on Antimicrobial Susceptibility Testing
EUHTF	EU Health Task Force
EULabCap	EU Laboratory Capability Monitoring System
EUPHA	European Public Health Association
EUPHEM	Public health microbiology path of the ECDC Fellowship Programme
EuroCJD	European and allied countries collaborative study group of Creutzfeldt-Jakob disease
Euro-GASP	European Gonococcal Antimicrobial Surveillance Programme
EURGen-Net	European Antimicrobial Resistance Genes Surveillance Network
EuSCAPE	European survey on carbapenemase-producing Enterobacteriaceae
EVA	ECDC Virtual Academy
EVAP	WHO European Vaccine Action Plan 2015–2020
EVIP	EU Vaccination Information Portal
EVIS	European Vaccination Information System
EVD	Emerging and vector-borne diseases
EWRS	Early Warning and Response System
FAO	Food and Agriculture Organization of the United Nations
FG	Function Group
FRA	European Union Agency for Fundamental Rights
FTE	Full-time equivalent
FWD	Food- and waterborne diseases and zoonoses
FWD-Net	European Food- and Waterborne Diseases and zoonoses network
GLLP	Global Laboratory Leadership Programme
GOARN	WHO Global Outbreak Alert and Response Network
HaDEA	European Health and Digital Executive Agency
HAI	Healthcare-associated infection
HAI-Net	Healthcare-Associated Infections Surveillance Network
HEPSA	Health Emergency Preparedness Self-Assessment
HSC	EU Health Security Committee
DG HERA	European Health Emergency Preparedness and Response Authority
HIV	Human immunodeficiency virus
IANPHI	International Association of National Public Health Institutes
IAS	Internal Audit Service
ICF	Internal Control Framework
IHR	International Health Regulations
IMF	Integrated Management Framework
IPA	Instrument of Pre-Accession Assistance
IPC	Infection prevention and control
IRIS	Issue-Resources-Impact-Solidarity (decision-making and prioritisation tool)
IRV	Influenza and other respiratory viruses
IVMAB	Immunization and Vaccine Monitoring Advisory Board
JEE	Joint external evaluation
JIACRA	Joint Interagency Antimicrobial Consumption and Resistance Analysis
JRC	Joint Research Centre
KPI	Key Performance Indicator
MB	Management Board
MediPIET	Mediterranean Programme for Intervention Epidemiology Training
MERS-CoV	Middle East respiratory syndrome coronavirus
MIS	Management Information System

MoU	Memorandum of understanding
NFP	National Focal Point
NGO	Non-governmental organisation
NITAG	National Immunisation Technical Advisory Group
NMFPs	National Microbiology Focal Points
NPI	Non-pharmaceutical interventions
OECD	Organisation for Economic Cooperation and Development
OIE	World Organisation of Animal Health
PHE	Public Health Emergency
PLF	Passenger locator form
RMS	Resource Management Section (ECDC)
ROA	Rapid Outbreak Assessment
RRA	Rapid Risk Assessment
RT-PCR	Reverse Transcription Polymerase Chain Reaction
SARI	Severe Acute Respiratory Infection
SARMS	Scientific Advice Repository and Management System
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SDG	Sustainable Development Goals
SLA	Service level agreement
SNE	Seconded national experts
SoHO	Substances of human origin
SPAR	State Party Self-Assessment Annual Report (IHR)
SPD	Single Programming Document
STEC	Shiga toxin-producing <i>E.coli</i>
STI	Sexually transmitted infections
TALD	Travel-associated Legionnaires' disease
TA	Temporary agent
TATFAR	Transatlantic Task Force on Antimicrobial Resistance
TB	Tuberculosis
TEPHINET	Training Programs in Epidemiology and Public Health Interventions Network
TESSy	The European Surveillance System
TTT	Threat Tracking Tool
UCPM	European Union Civil Protection Mechanism
VectorNet	European Network for Arthropod Vector Surveillance for Human Public Health and Animal Health
VENICE	Vaccine European New Integrated Collaboration Effort
VMP	Vaccine Monitoring Platform
VPD	Vaccine-preventable disease
VPI	Vaccine-preventable diseases and immunisation
WGS	Whole genome sequencing
WOAH	World Organisation for Animal Health (formerly known as OIE)
WHO	World Health Organization
WHO Europe	World Health Organization Regional Office for Europe

Management Board analysis and assessment

The Management Board has assessed the ECDC Consolidated Annual Activity Report for the financial year 2022. The Management Board appreciates the results achieved by the Centre during the third year of the COVID-19 pandemic and notes in particular the areas described below.

Implementation of the work programme 2022

The Management Board notes with satisfaction that despite the continued COVID19 pandemic, and operating two other PHEs simultaneously during summer 2022, ECDC was able to deliver 89% of the outputs planned in its Single Programming Document 2022–2024. A total of 8% of the planned outputs were postponed and 3% were delayed or cancelled by the end of the year. Most of the outputs that were postponed or delayed were dependent on the adoption and publishing of the amended ECDC Founding Regulation, which was adopted in November 2022.

Human resources

The Management Board notes ECDC's efforts in continuing recruitment for 73 new posts related to the Agency's amended mandate (both Temporary Agents and Contract Agents), given that some of the posts were approved for recruitment in 2021, but have been delayed due to pandemic. A total of nine posts were allocated for 2022, together with the carry forward from 2021. The Management Board also notes with satisfaction that 25% of the posts were filled by internal candidates, which consequently increased the number of recruitments to be carried out.

Budget

ECDC had a very good budgetary result in 2022. The Centre's core budget for 2022 (EUR 99.8 million) decreased by 40% compared to 2021 (EUR 168.1 million) as a result of changes in HERA grants. Budget execution in terms of commitment appropriations at year-end reached 98.86%, equivalent to EUR 98.7 million. Budget execution in terms of payment appropriations at year-end reached 73.61%, equivalent to EUR 73.5 million.

The Centre carried forward EUR 59 303 806 from 2021 to 2022, EUR 45 466 636 of which was paid (fund source C8). This corresponds to 76.67% of the amount carried forward.

Public health emergencies

The Management Board recognises ECDC's efforts operating several public health emergency (PHE) plans in parallel. The response to the COVID-19 pandemic continued for a second year in 2022, and is still ongoing, even though the level was downgraded to 'Acute Phase' in June 2022. The monkeypox PHE operated from May to October 2022, and between April to July 2022, a PHE was activated for hepatitis of unknown origin in children. This meant expert capacity had to be stretched to cover the activities required for all three emergencies, and the PHE structures adjusted so that roles and responsibilities remained clear.

Preparations for the implementation of the reinforced ECDC mandate, including ASPIRE

The Management Board is pleased that during 2022 the Centre started developing modalities for the implementation of the reinforced mandate, which came into force on 26 December 2022. ECDC also kept the Management Board regularly informed of the developments. The Management Board noted that in 2022 ECDC established a comprehensive transformation programme ASPIRE (Anticipate, Support, Prepare, Inform, Respond, and Empower) which is to be implemented by 2025. This programme will make the Centre aware of the changes coming from the amended ECDC Founding Regulation and their impact on its ways of working, as well as facilitating the implementation of the mandate.

In conclusion, the Management Board welcomes the Consolidated Annual Activity Report 2022, which provides a good overview of the Centre's achievements as set out in the Single Programming Document (SPD) 2022–2024, adopted by the Management Board.



Foreword by the Chair of the Management Board

I am pleased to introduce the ECDC Consolidated Annual Activity Report 2022, which summarises the work carried out by ECDC last year – the third year of COVID-19 pandemic, and a year during which two other PHEs were activated, namely hepatitis of unknown origin in children and the mpox outbreak. In 2022, the ECDC Management Board (MB) continued to focus on how ECDC delivered according to its mandate, whilst also returning to long-awaited face-to-face meetings.

In 2022, ECDC's Management Board voted for the extension of the current ECDC Director's mandate until June 2024, and continued to focus on how ECDC delivered according to its mandate. As the Chair of the Management Board, I would like to draw your attention to certain elements of ECDC's work in 2022, which are also related to the future.

The COVID-19 pandemic continued for the third consecutive year and ECDC maintained operations in accordance with its Public Health Emergency (PHE) plan, meaning that a large number of experts continued to work solely on COVID-19 rather than their normal tasks. In June 2022, due to the relatively stable epidemiological situation with COVID-19 and the increasing needs related to the emerging threats of hepatitis and mpox, ECDC gradually downgraded the PHE from Level 2 (Acute Phase) to Level 1 (Maintenance Phase). This allowed the Agency to shift resources to other PHEs, as well as change the focus of COVID-19 related work towards longer-term monitoring, prevention and control of SARS-CoV-2. ECDC also collected lessons learned from the pandemic through country visits, expert meetings, and internal workshops. In my view, this move from crisis mode to future normality was an important shift, which also encouraged similar national efforts.

The year of 2022 was the second year in which ECDC was implementing its Strategy 2021-2027. Despite several PHEs and unforeseen work due to Russian aggression in Ukraine, ECDC delivered 89% of the outputs planned in its Single Programming Document 2022–2024. Eight percent of the planned outputs were postponed, and three percent were delayed or cancelled by the end of the year, as they were dependent on the amended ECDC Founding Regulation, which was not adopted and published until 26 December 2022.

When Russia's aggression began in Ukraine in February 2022, ECDC acted swiftly. A Ukraine Task Force was set up to coordinate all ECDC activities related to Ukraine, both internal work and cooperation with relevant UN agencies, and the Management Board was updated regularly. The Director took a lead in establishing a dialogue with the public health authorities of the five Member States bordering Ukraine which were receiving most of the refugees fleeing the country. She also held meetings with Coordinating Competent Body (CCB) directors and national coordinators of all EU Member States. Through these discussions ECDC understood the real needs of the countries and was able to tailor its support to meet these needs. In addition, the Agency further increased the impact of its support by deploying communicable disease/public health experts to the countries, as necessary. I believe this is an example of how ECDC has been able to learn the lessons needed for the implementation of the ECDC reinforced mandate.

Throughout the process for the establishment of the European Health Union, the Management Board closely followed the negotiations for all the legal acts. In particular, the amended ECDC Founding Regulation and the Regulation on Serious Cross Border Threats to Health are so interlinked that they have to be read and interpreted hand in hand. Overall, the idea of the European Health Union is that all EU institutions, including the different Directorates-General (DGs), relevant EU Agencies and Member States, should work together in times of public health crisis. Therefore, it is important to ensure that the responsibilities of each of the players are clear, so that activities are well coordinated rather than duplicated. One of the most difficult aspects of implementing the legislation will be to ensure that the necessary processes are in place, and this also applies to ECDC. The Management Board will continue to support this endeavour by assisting ECDC with the implementation of its mandate, based on discussions initiated in 2022 and foreseen to continue in 2023.

Dr Anni-Riitta Virolainen-Julkunen,
Chair of ECDC Management Board

22 February 2023



Introduction by the Director

I would like to start by thanking colleagues in Member States for their contributions and openness in the dialogue, all the colleagues and partners in the EU and beyond for their collaboration during the year, and all ECDC staff for their stamina and dedication.

The year 2022 was still very much influenced by the COVID-19 pandemic. However, the COVID-19 PHE was gradually de-escalated, and it has been at Level-1 (Maintenance phase) since 9 June 2022, even though ECDC's workload related to the COVID-19 pandemic still remained high throughout the year.

This Consolidated Annual Activity Report describes very well the work conducted by ECDC in 2022; operating three PHEs simultaneously, and initiating several lessons-learned exercises with Member States and other partners. What is not included in this report is all the work we carried out internally in preparation for the implementation of the reinforced ECDC mandate. We also initiated discussions on some of these elements (e.g. European Health Task Force (EUHTF), preparedness, and surveillance with CCB directors and national coordinators), as well as with the Management Board. In 2022, we also conducted a comprehensive stakeholder engagement survey to gather information on the satisfaction of our stakeholders with our work, as well as on the use and impact of our selected outputs. The replies provided us with useful information for our future work.

I have indicated that in order to be successful in the implementation of ECDC's reinforced mandate we have to change the way we work and interact with the Member States. I believe that we have already learned lessons from the work we began in 2021 and continued in 2022 with the 11 Member States to increase the [COVID-19] vaccination uptake. I had regular meetings with the Coordinating Competent Body (CCB) directors, national coordinators, and national focal points for vaccine-preventable diseases and immunisation (VPI), and we organised virtual exchanges of information, webinars with the practitioners and experts, and a pilot training course on increasing vaccination acceptance for frontline healthcare workers.

We used the same principles with the five Member States bordering Ukraine which received the largest influx of refugees fleeing at the start of the Russian aggression. I met regularly with the CCB directors and national coordinators from the five Member States, as well as those from all EU/EEA countries to monitor the situation and adjust ECDC support, as required. I personally felt that this way of working helped us to understand the real needs of the countries and enabled us to tailor our support accordingly. I strongly believe that this kind of dialogue with countries will be the best way forward, as our amended Founding Regulation puts much more emphasis on hands-on support, based on profound country knowledge.

In this context, there is an increased need to exchange information and knowledge between ECDC, Member States, and other partners, as well as to facilitate exchanges between the Member States. There are new technologies and methods (e.g. artificial intelligence, machine learning, and new analytic methods/modelling) which, to date, we have little experience of, and therefore bringing all the existing knowledge together (e.g. by establishing communities of practice) would help to enhance our collective thinking on how and whether to use these technologies for public health.

The last point I would like to make is the one we all experienced last year - how to make the transition from working at home in a virtual environment back to the office. This has not necessarily been easy, either at personal or an organisational level. However, I trust that the value of human interaction has become evident. This transformation was also tangible when moving from fully virtual to hybrid or face-to-face only meetings. We discussed the need for different types of meetings with our governing/advisory bodies and learned that in-depth discussions need presence, and therefore we are now advocating face-to-face meetings to continue the dialogue on our joint task of implementing ECDC's new mandate.

Andrea Ammon
ECDC Director

8 March 2023

Executive summary

Agency in brief

Legal and procedural background

This document is based on Founding Regulation (EC) No. 851/2004 of the European Parliament and of the Council of 21 April 2004¹, Article 14.5(d) which determines that 'the Board shall adopt the Director's Annual Report on the Centre's activities for the past year by 30 March.' Following its fifty-seventh meeting on 21 March 2023, the Management Board approved the final version of the Consolidated Annual Activity Report 2022.

Mission statement

The Centre's mission is set out in Article 3 of the Founding Regulation:

'The mission of the Centre shall be to identify, assess and communicate current and emerging threats to human health from communicable diseases. In the case of other outbreaks of illness of unknown origin, which may spread within or to the Community, the Centre shall act on its own initiative until the source of the outbreak is known. In the case of an outbreak which clearly is not caused by a communicable disease, the Centre shall act only in cooperation with the competent authority, upon request from that authority.'

The Centre's mandate is derived from Article 168 of the Treaty on the Functioning of the European Union (EU), with an overarching principle of ensuring a high level of human health protection in the definition and implementation of all Union policies and activities.

Key tasks of ECDC include:

- operating dedicated surveillance networks;
- providing scientific opinions and promoting and initiating studies;
- operating the Early Warning and Response System;
- providing scientific and technical assistance and training;
- identifying emerging health threats;
- collecting and analysing data;
- communicating on its activities to key audiences.

ECDC's vision

To improve lives in Europe and globally through the application of scientific excellence, thus empowering the Member States, the European Commission, and other partners to drive public health policy and practice.

Strategic work areas

ECDC's 2021-2027 strategy has five main objectives:

Strategic objective 1. Strengthen and apply scientific excellence in all ECDC activities and outputs to inform public health policy and practice.

This strategic objective focuses on the setting and promotion of standards, the provision of evidence and guidance for public health policies and practice, the development and implementation of methodologies to increase the impact of public health actions in the field of communicable disease prevention and control, and the knowledge transfer aimed at bridging the gap between science, policy and practice.

Strategic objective 2. Support the countries to strengthen their capacities and capabilities to make evidence-based decisions on public health policies and practices.

Disease-specific work is at the core of fulfilling this strategic objective, with a focus on the prevention of infectious diseases. This strategic objective tackles the use of country information to improve country support, and help reinforce prevention and control programmes, training and emergency preparedness in the EU Member States.

¹ Regulation (EC) No 851/2004 of the European Parliament and of the Council of 21 April 2004 establishing a European Centre for Disease Prevention and Control, Official Journal of the European Union. 2004; L 142:1–11.

Strategic objective 3. Future outlook: prepare for the future through foresight and innovation assessments.

This strategic objective is focused on applying foresight methods to identify and address knowledge gaps and areas of uncertainty, engaging with EU research and innovation initiatives and supporting transformation by assessing the impact of new technologies and methods.

Strategic objective 4. Increase health security in the EU through strengthened cooperation and coordination between ECDC and partners in non-EU countries.

This strategic objective is delivered through the development and implementation of programmes to support the Western Balkans, Türkiye and European Neighbourhood Policy (ENP) partner countries and to ensure collaboration and coordination with major Centres for Disease Prevention and Control, international partners and EU institutions towards the achievement of common objectives.

Strategic objective 5. Transform the organisation to the next generation ECDC.

This strategic objective is focused on increasing organisational effectiveness and efficiency, ensuring staff engagement and enhancing the transparency, visibility and availability of ECDC's outputs.

Organisational structure

ECDC's organisational structure², in force since January 2020, consists of three operational units, two support services units and the Director's Office. The Disease Programmes (DPR) Unit focuses on the disease-specific aspects necessary to empower ECDC's partners to drive public health policy and practice. A major part of ECDC's outputs come from this Unit, guided and supported by the Scientific Methods and Standards (SMS) and Public Health Functions (PHF) Units. The Scientific Methods and Standards Unit leads the processes for strengthening the scientific excellence and the dissemination of knowledge within the organisation and to partners, including the quality assurance of ECDC's scientific work and the organisation of the ESCAIDE conference. The Public Health Functions Unit is responsible for the delivery of ECDC's statutory public health functions surveillance, training and emergency preparedness and response support and works closely with the disease programmes, providing the data and systems required for the respective disease-specific outputs.

The Director's Office, the Resource Management Services (RMS) and the Digital Transformation Services (DTS) Units support the achievement of the objectives of the abovementioned operational units. The Director's Office oversees the implementation of the Centre's strategy and coordinates the Centre's strategic relationships with its governing bodies and other external stakeholders in and outside of the EU. The Resource Management Services Unit ensures the efficient management of the human and financial resources of the Centre and its premises. It provides procurement, legal, meeting organisation and travel arrangement services for the organisation. The Digital Transformation Services Unit delivers advice and studies, software products, development expertise, front-end services, application hosting and enterprise infrastructure services in support of ECDCs' core missions and administration.

The structure of this report reflects the structure of the ECDC Single Programming Document 2022–2024. The achievements of the Centre are presented in accordance with the ECDC strategy 2021–2027³ structure.

2022 in brief

In 2022, ECDC delivered 89% of the outputs planned in its Single Programming Document 2022–2024. A total of 8% of the planned outputs were postponed, and 3% were delayed or cancelled by the end of the year. Most of the outputs that were postponed or delayed were dependent on the amended legal text of ECDC's mandate, which was adopted and published in December 2022 (for details see Annex 1. Core business statistics 2022).

² See Annex 3. Organisational chart.

³ ECDC Strategy 2021–2027 available from: <https://www.ecdc.europa.eu/en/publications-data/ecdc-strategy-2021-2027>

Work on the COVID-19 pandemic

Throughout 2022, ECDC maintained its public health emergency (PHE) plan in response to the continuing COVID-19 pandemic for the third consecutive year. In June, due to a relatively stable epidemiological situation for COVID-19 and increasing needs related to the emerging threats of hepatitis and mpox, the PHE level was gradually downgraded from Level 2 (Acute Phase) to Level 1 (Maintenance Phase). This decision was taken as part of a continuous dialogue with the European Commission, Member States, and other stakeholders, while ECDC remained prepared to scale up quickly again, should the situation have required.

Nevertheless, ECDC's pandemic-related workload remained high throughout the year, although the focus did shift towards longer-term monitoring, prevention and control of SARS-CoV-2. Throughout the year, ECDC continued to publish weekly COVID-19 country overview reports with multiple surveillance indicators, as reported by EU/EEA countries, while also incorporating data reported by the Western Balkan countries and Türkiye.

During 2022, some of ECDC's efforts towards curbing the pandemic included the activities below.

- ECDC offered needs-based sequencing support to Member States that had not yet fully transitioned to WGS-based surveillance, to enhance their immediate capacity to detect and monitor SARS-CoV-2 variants under the EU bio-defence preparedness plan against SARS-CoV-2 variants.
- ECDC launched support to the Member States for microbiology capacity-building for SARS-CoV-2 and influenza. Contributions were made towards strengthening Member States' capacities in surveillance and outbreak preparedness by extending molecular and genomic typing, and providing technical support to public health reference laboratory networks and facilitation of scientific findings integrated into surveillance systems.
- ECDC continued to address social and behavioural aspects as well as effective risk communication for the prevention and control of specific diseases, with a particular focus on COVID-19 and promoting vaccination acceptance and uptake. A range of trainings was conducted on vaccination communication (for 11 Member States with sub-optimal COVID-19 vaccination uptake); risk communication (for the ECDC Summer School and the Health Security Initiative countries), and addressing vaccination misinformation (EPIET). The European Vaccine Monitoring Platform (VMP) was set up jointly with the European Medicines Agency (EMA) to assess the impact and effectiveness of COVID-19 brand-specific vaccines. The COVID-19 Vaccine Tracker continued to operate throughout 2022.
- ECDC worked through different approaches to collate lessons identified from the COVID-19 pandemic. An internal exercise was conducted, to collect experiences from the ECDC experts involved in supporting work during the COVID-19 PHE, followed by the collection and review of 'lessons learned' reports published by different countries. In addition, six country visits were undertaken between May and September 2022 to discuss lessons identified at the country level. Finally, an expert consultation meeting, focusing on lessons learned from the COVID-19 pandemic, was organised with the Member States in September 2022, with the participation of more than 70 EU/EEA experts.

ECDC continued to manage the grants awarded to countries in September 2021 under the EU Health Emergency Preparedness and Response Authority (HERA) incubator, to strengthen WGS and diagnostic infrastructures within the countries' national public health programmes (more than EUR 77 million were awarded to 24 EU/EEA countries). The Agency also continued to collaborate with DG SANTE and the European Health and Digital Executive Agency (HaDEA) to award follow-up grants to countries under the EU4Health programme. The immediate objective was to reinforce countries' capacities for early detection and enhanced monitoring of emerging and known variants of SARS-CoV-2.

Ukraine Crisis, mpox and hepatitis

In addition to the ongoing COVID-19 pandemic, there were several other challenges which threatened public health in the European Union and demanded a proactive response from ECDC.

Following Russia's aggression in Ukraine and the influx of refugees fleeing the country, ECDC established the Ukraine Task Force (UTF) which actively coordinated and delivered technical and operational response activities, based on the needs identified which came within the remit of ECDC. In the second half of the year, the focus shifted from operational response to more medium-/longer-term and strategic response actions. Throughout the year, ECDC's Director had regular meetings with the CCB directors and national coordinators from the five Member States bordering Ukraine, as well as with the CCB directors and national coordinators of all EU/EEA countries, to monitor the situation and adjust ECDC support as needed. In addition, ECDC infectious disease experts and communication officers were deployed to Poland and Romania in support of national authorities and the World Health Organization (WHO) to assist Ukrainian displaced populations.

In 2022, a significant outbreak of mpox was detected in EU/EEA countries for the first time, with multiple human-to-human transmissions. ECDC launched a PHE to deal with this mpox outbreak, which operated from May to

October 2022. ECDC supported the surveillance, response, preparedness and prevention abilities and activities of the Member States. Various training courses and webinars were delivered to strengthen public and veterinary health professionals' knowledge. ECDC published multiple risk assessments, epidemiological updates, such as the Joint Mpox Surveillance Bulletin with WHO's Regional Office for Europe, and guidance documents.

Furthermore, between April and July 2022, a PHE was activated following an outbreak of hepatitis of unknown origin in children. During this period, ECDC set up a case-based surveillance system with a common case definition and reporting protocol for countries to report cases. Results from the analysis of this data were periodically published in the Joint ECDC/WHO Regional Office for Europe Surveillance Bulletin.

Thus, during the spring and summer of 2022, ECDC was supporting three PHEs simultaneously. PHE teams were organised to ensure minimum overlap for the experts and managers involved, however, this experience was unique for ECDC and tested the limits of our capacity to develop risk assessments and guidance for multiple health threats.

Work on ECDC's strategy 2021–2027: main achievements

Despite the challenge of the COVID-19 pandemic, combined with the outbreaks of mpox, hepatitis of unknown origin in children, and the Ukraine crisis, ECDC still managed to produce most of its regular outputs.

- ECDC updated its Surveillance Atlas of Infectious Diseases with 2021 data and published updated Annual Epidemiological Report chapters covering 2019, 2020 and 2021 to catch up with delays due to the COVID-19 pandemic.
- The new ECDC surveillance portal, EpiPulse, allowing ECDC and Member States users to perform all surveillance operations from one single entry point, was adapted to generate the daily and weekly Communicable Diseases Threats Reports (CDTR), which were published throughout the year.
- ECDC continued producing independent and evidence-based scientific advice. The Centre published 210 ECDC scientific outputs on its website and 65 peer-reviewed articles in scientific journals.
- The training of cohorts 2021 and 2022 of the ECDC Fellowship Programme was delivered as planned. In 2022, 24 fellows graduated from the ECDC Fellowship Programme and the EPIET-associated programmes, while 73 fellows were enrolled by the end of the year.
- All ECDC hallmark events were successfully organised: the ESCAIDE conference (23–25 November 2022), which was held as a hybrid event for the first time and received overwhelmingly positive feedback; the European Antibiotic Awareness Day (18 November 2022), and the ECDC session at the European Health Forum Gastein (EHFG) (28 September 2022).

In the area of surveillance, ECDC started a framework contract with a consortium to facilitate the transition of Member States towards automated surveillance from electronic health records. A total of 13 countries began implementing surveillance of Severe Acute Respiratory Infections (SARI) and 22 are ready to start with surveillance of bloodstream infections in 2023.

To support knowledge exchange between Member States, ECDC released a new Repository of Member State Policy and Practice Resources. The repository will act as a gateway to quality-assured policy and practice resources that have been published by national public health institutes, national ministries of health, or recognised and respected learned societies and academies. The aim of the repository is to facilitate and improve the sharing of such resources and expertise. The topic being piloted is SoHO biovigilance guides, with more developments planned for 2023.

In 2022, the journal *Eurosurveillance* achieved its highest impact factor ever, with a figure of 21, and it now ranks fifth among the journals in its field. The journal is now also signatory to the United Nations Sustainable Development Goals (SDG) publishers' compact and, as such, is committed to promoting articles and initiatives contributing to the achievement of the health-related SDG Goal 3.

As part of the targeted country support work of the Centre, an initiative was launched to support the 11 Member States with COVID-19 vaccination uptake lower than the EU average. This included bilateral meetings between ECDC's Director and the CCB directors, national coordinators, and National Focal Points (NFPs) for Vaccine-preventable diseases and Immunisation (VPI), virtual exchange of information and webinars with the practitioners and experts in the Member States, and a training pilot course on increasing vaccination acceptance for frontline healthcare workers.

The projects funded through European Commission grants continued: 'Preparatory measures for the participation of the Western Balkans and Türkiye in the European Centre for Disease Prevention and Control with special focus on One-Health against AMR and enhanced SARI surveillance, 2020 – 2024'; 'EU Initiative on Health Security' and 'EU for health security in Africa: ECDC for Africa CDC'.

These achievements, together with other activities carried out by ECDC throughout 2022, are outlined in more detail in the respective sections.

Other ECDC areas of activity: ECDC's strengthened mandate

In October 2022, the Council adopted the amended ECDC Founding Regulation, as one of the final blocks of the European Health Union, thereby building a powerful legal framework to improve EU capacity in the vital areas of prevention, preparedness, surveillance, risk assessment, early warning, and response.

The main changes included in ECDC's strengthened mandate are the following:

- support to EU Member States with digitalised EU-level surveillance;
- joint preparedness and response planning with EU Member States;
- stronger guidance through non-binding recommendations;
- enhanced support through the assistance of a standing, ready-to-deploy EU Health Task Force (EUHTF), as well as a reinforced international role;
- reinforced capacity for modelling and forecasting;
- focus on prevention and monitoring of health systems' capacities for prevention, diagnosis, and treatment;
- coordination of a network of Union reference laboratories for public health (EURLN);
- coordination of a network of Member State services supporting the use of substances of human origin;
- a new platform for post-authorisation monitoring of effectiveness and safety of vaccines, hosted jointly by EMA and ECDC.

To be able to implement the above, ECDC needs to change its focus and emphasis, as well as its way of working. In 2022, ECDC conducted a series of consultations with its stakeholders, regarding the new mandate in general and some of the areas of work in which the changes will have the most impact. In May, the mandate and its impact on ECDC's way of working were discussed at the annual meeting for directors and national coordinators of ECDC Coordinating Competent Bodies (CCB), where the focus was on support for preparedness and response planning, digital solutions for EU surveillance and the EU Health Task Force.

In June, ECDC presented the proposal for the 2024 priorities to the Management Board and demonstrated how changes to the amended ECDC mandate were incorporated into its planning. In November, this discussion was followed up with the presentation of the high-level roadmap for the implementation of ECDC's amended mandate. This roadmap encompasses the main milestones that the Centre aims to achieve in selected areas until 2027, including increased use of foresight; strengthening of digitalisation and integrated surveillance; transitioning to the EURL model, strengthening of preparedness and response planning; establishing the EU Health Task Force, and enhancing the role of ECDC as a global health security partner.

In addition, ECDC initiated a revision to the structure and content of its Strategy 2021-2027 to reflect the amended mandate, ensuring that ECDC's actions in the coming years will focus on implementing the strengthened mandate and adapting the organisation and its way of working to future challenges.

Last but not least, ECDC's transformation programme 'ASPIRE' (Anticipate, Support, Prepare, Inform, Respond, and Empower) was developed to make the Centre aware of the changes arising from the amended ECDC mandate and their impact on its ways of working, as well as to ensure smooth implementation.

ASPIRE will be implemented throughout 2023 and 2024 and will encompass initiatives such as a gap analysis of competencies and capabilities, an ecosystem analysis, the development of a stakeholder engagement framework, and revision of the Strategy implementation roadmap, key outputs, processes, and KPIs.

Part 1. Policy achievements

Indicators of the multiannual programme

Strategic KPI	Baseline	Target	Means of verification	Frequency of verification	Result 2022
Stakeholder satisfaction with ECDC 1. Surveillance 2. Microbiology 3. Preparedness and Response 4. Public Health Training 5. Communication 6. Antimicrobial consumption, antimicrobial resistance, and healthcare-associated infections. 7. Emerging and vector-borne diseases 8. Food and waterborne diseases and Zoonoses 9. STI, Blood-Borne Viruses and TB 10. Viral Respiratory Diseases 11. Vaccine preventable diseases	N/A	TBC	Stakeholder satisfaction survey	Biennial	1. 83% 2. 80% 3. 90% 4. 92% 5. 90% 6. 79% 7. 92% 8. 86% 9. 94% 10. 89% 11. 67%
Uptake of ECDC scientific outputs: a. Success in addressing the public health threads/issues; b. Changes in legislation; c. Changes in national policies; d. Improvements or corrective measures in public health systems (including IT systems); e. Changes in national guidance/recommendations; f. Communication to your target audience (e.g. decision makers, media, public, healthcare workers); g. Discussion with peers and colleagues (inside or outside your organization).	N/A	tbc	Stakeholder satisfaction survey	Biennial	a. 56% b. 32% c. 44% d. 47% e. 58% f. 69% g. 74%
Overall stakeholder satisfaction with the work of ECDC.	N/A	70%	Stakeholder satisfaction survey	Biennial	86%
Level of laboratory capacity reached in Member States: EULabCap Index for EU/EEA countries (mean national EULabCap index + potentially inter-country index variation).	EULabCap: 7.8 mean national index (2018)	0.3 point increase	EULabCap surveys	Biennial or Triennial	Not available for 2022.
Percentage of ECDC staff engagement.	61%	75%	Data collected through Human Resources (HR) survey.	Biennial	61% (measured in 2021)

Strategic objective 1. Strengthen and apply scientific excellence in all ECDC's activities and outputs to inform public health policy and practice

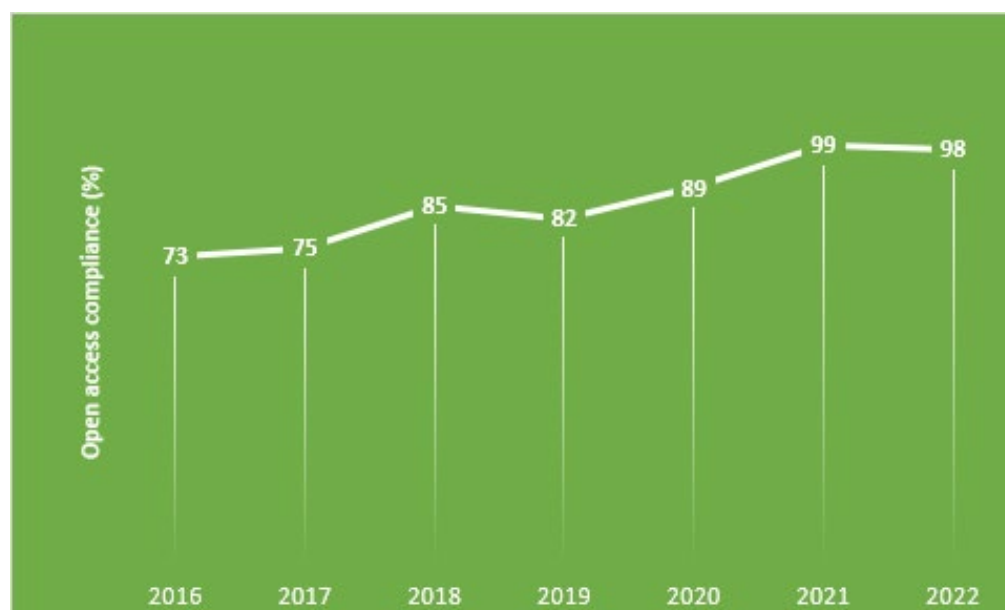
1.1 Standards: promote standard-setting to facilitate the use of data and the implementation of public health policies

In 2022, ECDC set up a cross-unit working group to revise its scientific output and scientific advice processes in the light of the Centre's revised mandate. This work was done in consultation with ECDC's Advisory Forum which endorsed a set of guiding principles for the development of scientific advice in May 2022. The update of the compendium of resources, including guiding principles, processes and related standards for the scientific production, has started. Guiding principles, processes and related standards will be made available on the Centre's website following approval by ECDC's senior management and the Management Board.

The ECDC open access and authorship policies, published for the first time in 2017, have been revised. The Centre has renewed its commitment to ensuring that work it generates is disseminated and easily accessible to all EU citizens, and that contributions to ECDC's work are acknowledged fairly, adhering to principles of transparency and equitability.

As a publicly funded agency, ECDC makes sure that its scientific output is freely available, both on its website and in scientific journals. In 2022, 98% of ECDC publications in peer-reviewed journals were open access.

Figure 1. Evolution of the rate of ECDC open access publications, 2016–2022



In the area of surveillance, ECDC started the process of reviewing the diseases under EU/EEA surveillance and their case definitions. The aim is to further standardise the surveillance process and improve the efficiency and fitness-for-purpose of EU/EEA-level surveillance. The result of this exercise will be used as ECDC input to an Implementing act for Regulation 2371/2022 on serious cross-border threats to health during 2023. Surveillance standards for acute respiratory infections were also defined and published in June 2022.

1.2 Evidence: provide partners with robust evidence and guidance for public health policies and practice

Throughout 2022, the Centre continued threat detection through event-based surveillance, expanding the range of data sources. Surveillance and epidemic intelligence were further integrated to enhance the detection, validation and assessment of signals, particularly in response to the emergence of mpox and of an excess of hepatitis of unknown origin in children.

In May 2022, the mpox outbreak came to light and for the first time, a number of cases were reported in the EU and worldwide, including in countries where it is not endemic. Since the outbreak began, ECDC has been conducting surveillance and has published multiple risk assessments, epidemiological updates, and guidance documents.

ECDC also updated its Surveillance Atlas of Infectious Diseases with 2021 data and published updated Annual Epidemiological Report chapters covering 2019, 2020 and 2021 to catch up with delays due to the COVID-19 pandemic.

Enhanced surveillance reports were published jointly with WHO's Regional Office for Europe for tuberculosis, HIV/AIDS and anti-microbial resistance (AMR). Annual epidemiological reports were published for chlamydia infection, hepatitis B and C, lymphogranuloma venereum, syphilis and congenital syphilis, tuberculosis, AMR, antimicrobial consumption and *Clostridioides (Clostridium)* infections. For hepatitis, ECDC worked to improve the data for surveillance and monitoring by implementing several projects (e.g. conducting sero-prevalence surveys).

In addition, ECDC published its assessment of the health burden of infections with antibiotic-resistant bacteria in the EU/EEA, with an update for 2016–2020.

ECDC continued to provide technical support to public health reference laboratory networks across the EU/EEA and to enlargement countries, also taking into account the activities of WHO's network of reference laboratories. These activities included External Quality Assessment (EQA) exercises, training and other capacity-building activities.

ECDC continued to coordinate the European Reference Laboratory Network for TB (ERLTB-Net) and, together with the implementing consortium, the Agency organised a network meeting, external quality assessment, and capacity-building activities. An external quality assessment was also carried out for gonorrhoeal antimicrobial resistance with Member States' national reference laboratories and the report published with the results for 2021.

The Centre continued to help develop rapid communication of laboratory-based information for surveillance and alert, and support Member States in strengthening their microbiology capacity, based on gaps identified by the EULabCap indicators and EQA schemes.

ECDC also offered needs-based sequencing support to Member States that have not yet fully transitioned to WGS-based surveillance. During 2022, ECDC offered high-capacity sequencing support to Member States to enhance their immediate capacity to detect and monitor SARS-CoV-2 variants under the EU bio-defence preparedness plan against SARS-CoV-2 variants. ECDC and the European Commission are continuing to provide EU/EEA Member States and Western Balkan countries with access to outsourced whole genome sequencing services for SARS-CoV-2 samples. More than 110 000 samples from 12 EU/EEA Member States and three Western Balkan countries were processed between January and December 2022. Timely and secure WGS data sharing and storage are facilitated by customised, protected workspaces for WGS data management.

In 2022, ECDC continued to provide support to the European Health and Digital Executive Agency (HaDEA) and its contractors in the EURGen-RefLabCap and FWD AMR RefLabCap projects. The focus here was on strengthening coordination, support and capacity-building for national microbiology reference laboratories in the testing and surveillance of antimicrobial resistance for priority healthcare-associated infections, and *Salmonella* and *Campylobacter* in human samples.

ECDC continued to collaborate with the European Food Safety Authority (EFSA) on the detection and public health risk assessment of foodborne outbreaks. In July, a joint ECDC and EFSA whole genome sequencing system was opened to support Member States with detection and response to foodborne outbreaks, as a part of the 'One-Health' agenda. The [EU Summary Reports on Antimicrobial Resistance](#) in zoonotic and indicator bacteria from humans, animals and food in 2019–20 were published in March 2022. The [European Union One Health 2021 Zoonoses Report](#) was also published in December.

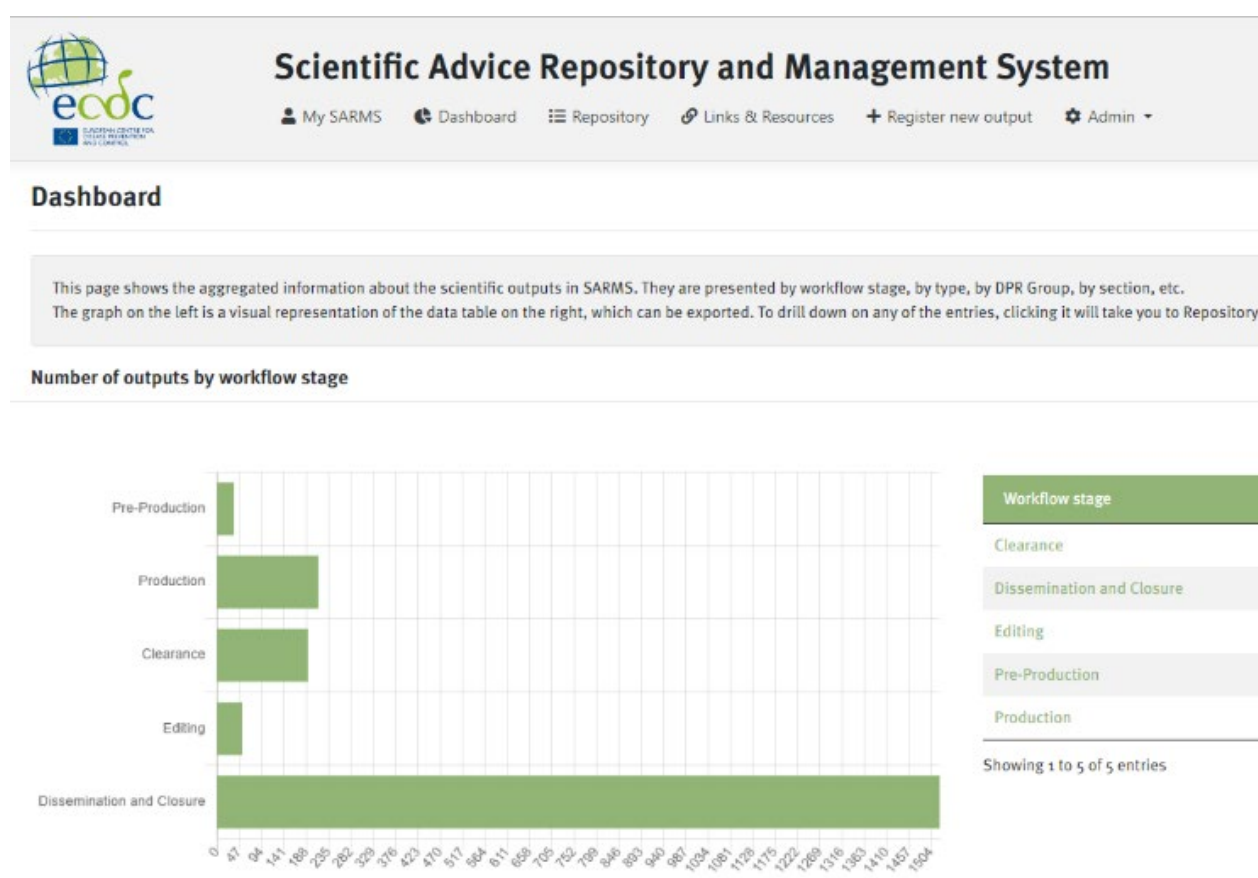
Throughout 2022, activity continued in connection with SARS-CoV-2 and seasonal influenza, including zoonotic influenza – e.g. the production of regular outputs such as Flu News, risk assessments, weekly COVID-19 outputs and joint reports. Efforts are ongoing to revise and merge the current influenza and SARS-CoV-2 surveillance, including the simplification of data collection. Consultations were held with external stakeholders, including Member States and WHO.

ECDC continued to strengthen its internal capacities and capabilities in biostatistics and mathematical modelling. In-depth and advanced bio-statistical and mathematical modelling analyses contributed high-quality technical input to COVID-19 and non-COVID-19 outputs, such as rapid risk assessments and technical reports.

1.3 Methodologies: contribute to the development and implementation of methodologies to increase the impact of actions to reduce the burden of infectious diseases

Throughout 2022, the Centre continued managing and monitoring all its scientific outputs to ensure high-quality, timely delivery through its Scientific Advice Repository and Management System (SARMS). SARMS includes templates, checklists and guidance, and is continuously being revised and improved to support the production of the Centre's scientific outputs, including scientific advice and recommendations. The system also functions as a searchable repository of outputs. All outputs intended for publication on ECDC's website or for submission to conferences or peer-reviewed journals are reviewed and formally cleared by at least two senior staff before dissemination, as well as all outputs with scientific content in response to external requests received by the Centre. This ensures quality and compliance with policies and standards. An overview of produced and planned outputs is extracted from SARMS and presented to ECDC's Advisory Forum every year and made available on the Centre's website. The list of planned outputs for 2022 has been published on ECDC's website⁴.

Figure 2. Dashboard of the Scientific Advice Repository and Management System (SARMS), number of outputs by workflow stages, 3 February 2023



In 2022, ECDC started developing a framework and indicators to help assess the impact of its scientific work. In May 2022, a draft of the scientific impact framework was discussed with ECDC's Advisory Forum, which showed a strong interest in the work. In 2022, ECDC continued consultations and initiated new collaborations with sister EU agencies on the topic of scientific impact, a common area of interest. Further discussions and workshops are planned for 2023. Steps have also been taken internally to communicate and increase awareness of the scientific impact framework to increase the engagement of all the staff. The final version will be made available on the Centre's website following additional consultation with technical experts in 2023.

⁴ ECDC's planned scientific outputs, 2022: <https://www.ecdc.europa.eu/en/about-us/who-we-are/key-documents/planned-scientific-outputs>

1.4 Knowledge transfer: bridge the gap between science, policy, and practice to ensure a sustainable impact on prevention and control of infectious diseases

In 2022, significant strides were made to address issues relating to the information architecture of ECDC's website – a key channel for the dissemination of the Agency's knowledge and scientific outputs to external audiences. The website's browsing experience was enhanced and content re-categorised and relabelled to align it with the core needs of users. New desktop and mobile-responsive navigation features were also designed and deployed, including a new drop-down mega-menu and left-hand navigation bar to significantly improve the visibility of ECDC's most sought-after resources for users.

A machine translation feature was deployed on ECDC, EAAD (European Antibiotics Awareness Day) and ESCAIDE (European Scientific Conference on Applied Infectious Disease Epidemiology) websites, allowing visitors to translate pages into one of the 24 official EU languages. This is an important step in improving the accessibility of the websites and promoting multilingualism, as recommended to EU agencies by the EU Ombudsman.

To support knowledge exchange between Member States, a new [Repository of Member State Policy and Practice Resources](#) has been designed, populated and released. The repository will act as a gateway to quality-assured policy and practice resources that have been produced or published by national public health institutes, national ministries of health, and recognised and respected learned societies or academies. The aim of the repository is to facilitate and improve the sharing of such resources and expertise – thereby improving collaboration across Member States and potentially reducing their need to invest in undertaking similar scientific work. The repository is at the pilot stage and the topic being piloted is Substances of Human Origin (SoHO) biovigilance guides that have been issued across the Member States, in line with the prominence given to SoHO under ECDC's new mandate.

Figure 3. Repository of Member State Policy and Practice Resources, landing page

Steps have also been taken to begin developing an internal framework for the management of knowledge. Most visibly, the Centre has enhanced its underlying knowledge management capabilities through improved knowledge management platforms and tools. The Enterprise Content Management Platform (ECMP) was launched in 2022. A new cloud-based platform to replace the existing intranet and document management system, the platform is a one-stop-shop for ECDC staff to access information, documents and internal and external workspaces - i.e. extranets. ECMP improves the free flow of knowledge and information across the Centre and enables ECDC staff to collaborate efficiently and act as one team.

The scientific journal Eurosurveillance has been offering public health experts/scientists and policy makers high-quality, open-access information and data relevant for timely public health action since 1996. When producing the journal, the editorial team applies intensive quality control and support to authors to ensure that the widely-accessible and distributed scientific information is sound, reliable, understandable, and actionable for a diverse audience. In line with its aim to provide a platform for sharing pertinent experience and advances in communicable disease prevention and control, the journal has published articles on integrated surveillance for respiratory viruses and structures for better preparedness and response to future health threats and crises. In connection with the

latter, the editors launched a series of editorials by the directors of ECDC (published in January 2023), EMA, DG HERA and DG SANTE (published in February 2023) outlining key features of their expanded (new) mandates and key pillars of the new European Health Union.

While COVID-19 pandemic-related articles continued to prevail among submissions and published articles, the year was also marked by other important public health events. These were reflected in rapid communications providing timely evidence for public health decision-making. Eurosurveillance featured several very early - or even first - accounts of worrisome signals, such as a *Salmonella* outbreak linked to chocolate products, the occurrence of hepatitis of unknown aetiology in children and the emergence of mpox outside of previously endemic areas.

To further enhance knowledge sharing and knowledge translation and recognition, two important new initiatives were piloted in 2022; co-reviewing (a senior reviewer mentors the early career researcher, and both are acknowledged) and the key public health message box - to enable informed non-expert audiences to better understand content and its impact on public health. In 2022, Eurosurveillance and ECDC marked the annual peer-review week in September with a webinar on ECDC peer-review culture and values in support of research and scientific integrity.

A further initiative was the signing by Eurosurveillance of the [Sustainable Development Goals \(SDGs\) publishers' compact](#) in December 2022. As a signatory, the journal will highlight and actively promote contributions and initiatives supporting the health-related SDG Goal 3.

The journal's 10th scientific seminar was dedicated to 'Communicating science: social media and other means. Pitfalls and benefits'. Once again, this seminar took place during the ESCAIDE conference, attracting about 350 attendees in person and 326 online, and was evaluated positively. Eurosurveillance editors held seminars and workshops on topics related to science reporting (peer-review, guidelines) and publishing (predatory journals, how to get published) as part of capacity-building activities.

In 2022, Eurosurveillance received its highest ever impact factor, with a figure of 21 (InCites Journal Citation Reports, Clarivate analytics, 2022) and now ranks fifth among 95 journals in the 'Infectious Diseases' category. Other metrics were equally favourable and attested to the high-ranking position of the journal among its competitors (Scopus CiteScore: 22, rank 3/562 category Medicine (Public Health, Environmental and Occupational Health), rank 4/108 Medicine (Epidemiology); SCImago Journal Rank (SJR): 45 of 2 489 journals in the category 'Medicine miscellaneous').

Once again, ESCAIDE brought together professionals from the EU/EEA and around the world to share scientific knowledge and experience in infectious disease epidemiology, public health microbiology and related scientific fields. In 2022, ESCAIDE was held as a hybrid event for the first time, with over 600 participants gathering on-site in Stockholm after two virtual conferences due to the COVID-19 pandemic. An additional 2 500 participants joined online. The conference received overwhelmingly positive feedback – 94% of those responding to the feedback survey indicated they were 'extremely' or 'very much' satisfied with the event. Respondents commented that it was an engaging and interactive conference with high-quality speakers and relevant discussions.

After a two year break due to the pandemic, the eighth edition of the Observership took place in person at ECDC's premises during the period 10–14 October 2022. There were 30 participants from the European Society of Clinical Microbiology and Infectious Disease (ESCMID), the European Society of Virology (ESCV) and the European Committee for Infection Control (EUCIC). The Observership week serves as a link between ECDC and the learned societies contributing to the positive reputation and visibility of the Centre among young and mid-career professionals and serves as an excellent platform for knowledge transfer. The Observership was highly successful, with very positive feedback from ECDC staff, the learned societies and observers. The observers stressed how the week helped them to understand ECDC's mandate and work, increased interest in public health topics, and supported networking. The ECDC Observership week will be re-conducted in 2023 (16-20 October 2023).

Strategic objective 1. Performance indicators

KPI	Baseline	Target	Means of verification	Frequency of verification	Result 2022
Scientific quality assurance: proportion of ECDC scientific outputs following the respective workflows, and formally reviewed and cleared before dissemination.	N/A	100%	SARMS workflows, publication statistics.	Annual	99.5%
Stakeholder satisfaction with daily and weekly Communicable Disease Threat Reports (CDTR).	N/A	80%	Stakeholder survey	Biennial	Weekly CDTR: all indicators rated as good or excellent by 100%. Daily CDTR: all indicators rated as good or excellent by 100%, except timeliness (86%).
Timely publication of updated surveillance data in the Surveillance Atlas.	80% of diseases within three months of end of data collection.	80% of diseases within three months of end of data collection.	Surveillance Atlas	Annual	13% of diseases within three months 74% within five months.
Efficiency: proportion of ECDC scientific outputs delivered and external requests for scientific input replied to within agreed deadlines.	N/A	100%	SARMS, Chrono, and similar request management systems.	Annual	Not measurable in 2022.
Accessibility: proportion of ECDC scientific manuscripts published as golden open access.	73% (in 2016)	100%	Publication databases, SARMS.	Annual	98%
Proportion of requests for sequencing services from Member States delivered.	TBC	100%	Requests received to PHF by DPR.	Annual	100% of requests were addressed.
Attendees' satisfaction with ESCAIDE.	TBC	> 75%	Conference satisfaction survey	Annual	94%
Placement of Eurosurveillance in journal rankings (basket of metrics).	N/A	Q1 in all metrics and five-year IF ranging between 6 and 10.	SCIMAGO journal rank, Google Scholar journal rank, Clarivate analytic, cite scores.	Annual	IF 21 (Journal Citation Reports, Clarivate analytics, 2022) #5/95 Scopus CiteScore 22 (Scopus), #3/562 category Medicine (Public Health, Environmental and Occupational Health), #4/108 Medicine (Epidemiology); SCImago Journal Rank (SJR): #45/2,489 journals in the category 'Medicine miscellaneous'.
Submissions from Eurosurveillance countries.	N/A	Submission from minimum 20 countries.	Eurosurveillance submission system	Annual	Submissions received from 33 of 36 countries represented by an advisor on the journal's editorial board.
Use of ECDC scientific outputs: - access to ECDC scientific outputs (number of citations) - impact factor of ECDC articles in peer reviewed journals.	- 30.55 - 7.36	- >20 in the five years following publication - >5	Journals	Annual	52.42 10.83

Strategic objective 2. Support the countries to strengthen their capacities and capabilities to make evidence-based decisions on public health policies and practices

2.1 Country focus: use country information to better target ECDC activities and country support

Targeted country support focuses on work with the EU/EEA Member States and medium-term priorities. The primary contact points are the ECDC Coordinating Competent Bodies (CCBs) through the National Coordinators (NC). In 2022, the work focused on developing internal tools to inform and support ECDC in obtaining more extensive knowledge on the EU/EEA Member States. Targeted support projects were also organised in parallel with this work.

The targeted country support work comprises country overviews and country missions with a view to identifying potential EU funding opportunities for Member States.

Country overviews

The country overviews dashboard aims to reuse data which has been collected by ECDC or is available as open data source from WHO, the Organisation for Economic Co-operation and Development (OECD), Eurostat, and other organisations. Country-specific information is collected to give ECDC a better understanding of the country context, strengths and vulnerabilities in relation to infectious diseases and public health systems. At the same time, the intention is 'to give the data back to the Member States'. ECDC collects a large amount of data from the Member States, some of which it aims to give back so the experts can use it for evidence-based practice and/or policy. The country overview dashboard is organised in seven areas: diseases and health issues; surveillance information; country and health governance; microbiology; preparedness and response to public health emergencies; workforce capacity and digital public health.

Building on the proof of concept work carried out in 2021, work during 2022 focused on content (definition of indicators), data sources and visual mock-ups in all seven areas of the dashboard. In addition, work has started on the IT tool for the visualisation of the indicators. The target date for full release is mid-2023. Once the product is ready, it will be shared and discussed with the representatives of the CCBs on a bilateral basis.

Country missions

During 2022, work began on a corporate country mission report form and a central repository for the reports. This work helps to ensure a corporate, harmonised approach to country missions. The creation of a central repository will make reports easier to retrieve for the required follow-up and recommendations. Country missions will be carried out at the invitation of a country, or following a dialogue between ECDC and the country experts. ECDC will investigate the implementation of a consolidated programme of country missions using a defined procedure.

EU funding opportunities for Member States

As ECDC does not have the financial capacity to support all Member States' needs, a draft list of possible EU funding sources was compiled to facilitate participation in and understanding of relevant EU projects to improve health systems and indicators. The list was shared with DG SANTE at the end of 2022 for suggestions before being finalised and shared with Member States.

Overall cycle and practical support for targeted country support

During the first half of 2022, the focus was on providing specific support to certain EU/EEA Member States in response to the challenges related to the COVID-19 pandemic and the Ukraine crisis. This was carried out through two initiatives led by ECDC's Director:

1. **Country support initiative to support the 11 Member States with a COVID-19 vaccination uptake lower than the EU average** (Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia, Slovakia). This initiative began in October 2021 and included bilateral meetings between ECDC's Director and the CCB Directors, National Coordinators and National Focal Points for Vaccine-Preventable Disease in each of the countries and a meeting with all 11 Member States.

During 2022, the following activities took place:

- Virtual exchange of information with Bulgarian clinicians;
- Webinar on local information plans for health promoters and GPs in Romania;
- Webinar on community engagement;
- Virtual exchange for GPs in Estonia;
- Training-of-trainers pilot course on increasing vaccination acceptance for frontline healthcare workers, hosted by Romania for all 11 Member States.

In addition, bilateral discussions were held on specific topics, including communication. A consultation with the beneficiary Member States will take place in early 2023 to decide the best ways forward.

- Support to Member States in the neighbourhood of Ukraine.** Following Russia's invasion of Ukraine on 24 February 2022 and the unprecedented number of refugees that left Ukraine, on 3 March ECDC established the Ukraine Task Force. The aim of this Task Force was primarily to ensure cross-organisational coordination of ECDC actions to address the needs of EU/EEA Member States and non-EU countries neighbouring Ukraine, as well as coordinating with the European Commission and international organisations (WHO and other UN agencies.) ECDC's Director initiated a series of meetings with the CCB Directors, National Coordinators, and experts from the Member States neighbouring Ukraine: Hungary, Poland, Romania, Slovakia and Czechia (that was added soon afterwards), as well with all EU/EEA countries. During 2022, a total of 11 meetings took place with these five Member States and two meetings with representatives of the Republic of Moldova. An exchange meeting was also held between the five Member States, Moldova and Greece. Based on the needs identified, 14 guidance documents have been published (to date) on the dedicated webpage. These documents are available in English, Hungarian, Polish, Romanian, Slovakian, Czech and Ukrainian. The publications include technical reports, editable posters and leaflets and infographics. The Ukraine Task Force also developed a three-level action plan with a set of medium- and longer-term activities tailored to the needs of the countries. This plan focuses on vaccination uptake; surveillance; continuity of care, microbiological capacity and technical support at bilateral level. In addition, ECDC experts participated in nine missions to support the EU Member States which received the largest numbers of refugees: four missions through DG ECHO to Warsaw and two through WHO to Krakow (Refugee Health Extension led by WHO), all of these focused on surveillance, and three missions in the area of communication (deployed through the Global Outbreak Alert and Response Network (GOARN)): one in Krakow and two at WHO's country office in Romania. Recent direct support to Ukraine included the preparation of a list of technical guidance documents in response to a request by the Public Health Centre Ukraine in the context of the International Association of National Public Health Institutes (IANPHI) to cover immediate priorities

Figure 4. ECDC key communication outputs related to the situation in Ukraine



As part of ECDC's country support capacity building in HIV, viral hepatitis, sexually-transmitted infections (STI) and tuberculosis (TB), EU/EEA countries were offered a total of ten activities in 2022. A newsletter communicating these activities, programme updates and scientific outputs, and other initiatives to potentially support countries (e.g. EU funding initiatives) was also disseminated to ECDC's networks on five occasions throughout the year. As part of an ECDC project on hepatitis C prevalence surveys (SPHERE-C), technical support was provided in 2022 to four countries on survey planning and/or execution and analysis. ECDC continues to support EU countries to generate estimates of HIV incidence, prevalence and the undiagnosed number of people living with HIV using ECDC's HIV modelling platform. In 2022, technical support was provided to three countries in using or interpreting data obtained from the tool. The European Reference Laboratory Network for TB continued to support countries with the provision of reliable and timely diagnostic services.

In 2022, ECDC conducted a joint 'One-Health' country visit to Cyprus with DG SANTE to discuss policies relating to antimicrobial resistance (AMR). Such country visits help to enhance the prevention and control of AMR and improve the implementation and effectiveness of national action plans, in line with the objectives in Council Recommendation 2002/77/EC and the latest Council Conclusions on AMR, as well as WHO's Global Action Plan on AMR, WHO's European strategic action plan on antibiotic resistance and the European One Health Action Plan on AMR. Similar country visits are planned for 2023.

In 2022, ECDC continued to coordinate and operate 19 disease networks and established one new network for substances of human origin (SoHO), including the recently created ECOVID-Net (established in 2020), E-SARI-Net (established in 2021) and seven public health networks.

2.2 Prevention and control programmes: support and strengthen capacity to deliver programmes to prevent and control infectious diseases

Strengthen ECDC's support for targeted prevention and control programmes

Based on robust surveillance data, ECDC continued to support countries with the enhancement of their prevention and control programmes to varying degrees, depending on the disease. The basis for this work was the production of timely and relevant evidence-based advice and risk assessments on communicable disease prevention and control to the European Commission and EU Member States.

Specific efforts included work to strengthen vaccination programme delivery and vaccine confidence, provision of guidance to develop evidence-based policies for prevention programmes on COVID-19, hepatitis, HIV, sexually transmitted infections and TB, SoHO, antimicrobial stewardship and infection prevention and control-related activities in healthcare settings. In addition, awareness was raised of control programme monitoring and country preparedness for a range of infectious disease threats, such as foodborne outbreaks and influenza.

ECDC published models of good practice for community-based testing, linkage to care and adherence to treatment for hepatitis B and C, HIV, and tuberculosis and for health promotion interventions to prevent infections among people who inject drugs. As part of ECDC's support in response to threats and outbreaks of mpox, severe acute hepatitis of unknown aetiology in children, and the influx of refugees from Ukraine, the Agency produced information notes, joint statements, interim advice and guidance.

Support to the Member States for microbiology capacity-building in the areas of SARS-CoV-2 and influenza was launched in mid-2022, and included EQAs, ring trials, antigenic characterisation, and bioinformatics training. Contributions were made to strengthening Member State capacity in surveillance and outbreak preparedness by extending molecular and genomic typing; providing technical support to public health reference laboratory networks and facilitating the integration of scientific findings into surveillance systems. The Agency also contributed to developing the integrated influenza/COVID-19 syndromic and virological surveillance, implementation of molecular surveillance strategy, further develop virological surveillance outputs for SARS-CoV-2 (antigenic and genetic), antiviral resistance for influenza and molecular surveillance.

In 2022, the collection and analysis of surveillance data on emerging, zoonotic, and vector-borne diseases in Europe continued, along with the monitoring of novel pathogens emerging worldwide. A significant outbreak of mpox was detected in EU/EEA countries, and ECDC provided support to the Member States with surveillance, response, preparedness and prevention activities.

A statistical modelling tool (ArboRisk) was developed to strengthen the evidence base for determining triggers for local response actions and improving the strategic timing and spatial allocation of public health resources against vector-borne diseases caused by the *Aedes* mosquito.

In addition to the EQAs for SARS-CoV-2 and influenza, numerous other EQAs were arranged in the area of food and waterborne and emerging and vector-borne diseases. This included the eighth [EQA scheme for *Listeria monocytogenes* typing](#) which was completed. In emerging and vector-borne diseases, two EQAs were performed on rodent-borne viruses and emerging alphaviruses. The next round of EQAs were also launched for the following topics: *Listeria*, Shiga-toxin producing *E.coli* (STEC) and *Salmonella*; an EQA for AMR in *Salmonella*, AMR in *Campylobacter* and in *Legionella*. The reports will be available in 2023. Furthermore, a practical training course on laboratory methods for *Legionella* detection and characterisation was also provided for the Member States.

Throughout the ongoing COVID-19 pandemic, ECDC has been providing relevant and high-quality pandemic monitoring data and scientific advice on COVID-19 prevention and control to support the European Commission and EU Member States. The European Vaccine Monitoring Platform (VMP) was set up jointly with the European Medicines Agency (EMA) to assess the impact and effectiveness of vaccines and detect possible safety signals, requiring further investigation. Several studies started in close collaboration with the EU Member States and WHO's Regional Office for Europe. EMA and ECDC convened the first Immunisation and Vaccine Advisory Board meeting (IVMAB) in Amsterdam on 6–7 December 2022. This is a multidisciplinary forum which brings together vaccine regulatory experts and representatives from EU national public health authorities. Its role is to provide advice on the prioritisation, design, implementation and interpretation of VMP studies to help inform regulatory and public health decisions on key vaccines used in EU immunisation programmes.

In 2022, ECDC published a number of protocols and reports related to the 'Vaccine Effectiveness, Burden and Impact Studies' (VEBIS) for COVID-19 and influenza on the basis of studies performed in four different settings: hospitals in the context of SARI surveillance (to estimate vaccine effectiveness against severe disease); primary care (to estimate effectiveness against moderate disease); healthcare worker cohorts (to estimate effectiveness against infection) and nationwide registries (to estimate effectiveness against severe disease).

ECDC also provided regular information on vaccine regulatory aspects and policies for the use of vaccines to prevent mpox in the EU/EEA and facilitated the sharing of country experiences on the roll-out of immunisation strategies and studies on vaccine safety and effectiveness.

ECDC continued to support the implementation of the 2018 Council Recommendation on Strengthened Cooperation against Vaccine-Preventable Diseases, with a special focus on COVID-19 and influenza vaccines. The Centre worked closely with the National Immunisation Technical Advisory Groups (NITAGs) and the Health Security Committee to support policy makers and public health experts at national level in the development of vaccine deployment plans, roll-out of vaccination campaigns, and implementation of vaccination strategies for COVID-19 vaccines. In 2022, ECDC organised ten webinars with the NITAGs on these topics, with the participation of EU and international stakeholders, such as the US Centers for Disease Prevention and Control, non-EU countries, and WHO. A virtual NITAG annual meeting was organised by ECDC in November 2022. The objective of the meeting was to review achievements and lessons learned three years after the launch of the NITAG collaboration project: to define priorities and improve processes and tools for evidence sharing, and discuss future directions, international and institutional collaborations. In September 2022, a service contract for systematic reviews of scientific evidence on vaccines and capacity-building activities was signed with the European Health and Digital Executive Agency (HaDEA), and ECDC is working closely with HaDEA and the consortium to implement these activities (systematic reviews, training, twinning arrangements, setting up a digital platform/repository and planning annual meetings).

In the area of AMR monitoring, ECDC worked with WHO's Regional Office for Europe to jointly establish a list of selected monitoring indicators, based on the UN Food and Agriculture Organization (FAO)/World Organisation for Animal Health (OIE)/WHO Tripartite Monitoring and Evaluation framework, and these indicators were reported in the first ECDC/WHO Regional Office for Europe joint report on AMR surveillance in Europe (2020 data), published on 26 January 2022. Analytical information of this kind on the level of response to AMR is intended to assist Member States in understanding where they should prioritise efforts to prevent and control AMR. Integration of indicators on structures, resources, and processes for the implementation of infection prevention and control (IPC) and antimicrobial stewardship (AMS) programmes in acute-care hospitals in the EU/EEA countries is ongoing and these are included in the third point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals, being carried out in 2022–2023.

In 2022, ECDC published monitoring reports on how far Member States have achieved the UN Sustainable Development Goals (SDGs) in the areas of HIV/AIDS, hepatitis, and TB. These reports provide important feedback and data to countries, helping them to benchmark and better plan their use of resources.

Address the behavioural aspects needed for national programmes to be successful

ECDC has continued to address the social and behavioural aspects, as well as effective risk communication for the prevention and control of specific diseases. In 2022, these efforts were primarily, but not exclusively, focused on COVID-19 and promoting vaccination acceptance and uptake. Specific outputs and activities are set out below.

- Publication of an e-learning course on addressing online vaccination misinformation in June 2022. This six-module e-learning course was the product of extensive formative research, including a needs and capacity assessment in six Member States. It provides learners with knowledge and tools on social media monitoring and social listening; pre-bunking; debunking; digital and vaccine literacy and evaluation of interventions to promote vaccination acceptance and uptake.
- A range of training courses were conducted on vaccination communication (for 11 Member States with suboptimal COVID-19 vaccination uptake); risk communication (for the ECDC Summer School and the Health Security Initiative countries); and addressing vaccination misinformation (EPIET).
- Social and behavioural science contributions were made to a range of ECDC publications, including COVID-19 vaccination strategies; guidance for the prevention and control of COVID-19 in temporary reception centres in the context of the large numbers of people fleeing Ukraine; risk communication and community engagement during the mpox outbreak and acute hepatitis in children.
- Awareness-raising concerning social and behavioural sciences for the prevention and control of infectious diseases continued through presentations at a range of venues (to Member States, the European Commission, EU agencies, academic institutions, and multilateral agencies.)
- In September 2022, a pilot mapping project of social and behavioural science capacities was initiated in four Member States, which, when concluded in Q2 of 2023, will provide methodological guidance for the development of a larger, EU-wide community of practice for social and behavioural scientists. This community of practice will play an important role in the evolving EU prevention framework, development of which is now also underway.

Emphasise a general 'One-Health' approach to relevant work at ECDC

ECDC aims to further identify and develop its role in prevention and control of infectious diseases in a 'One-Health' perspective. In 2022, work was initiated on the development of an ECDC 'One-Health' framework. This work will continue in 2023. In 2022, ECDC provided high-quality monitoring data and scientific advice for food and waterborne disease outbreak prevention and control in cooperation with EFSA to support the European Commission and EU Member States.

Trends in AMR in infections from zoonotic bacteria were monitored and compared with those from livestock and food using a 'One-Health' approach.

Work continued to identify emerging strains of AMR which are of particular concern, such as those which are multidrug-resistant, extended spectrum beta-lactamase-producing bacteria and/or carbapenemases under the European Antimicrobial Resistance Genes Surveillance Network (EURGen-Net), a network for genomic-based surveillance of multidrug-resistant bacteria of public health importance. In 2022, ECDC continued to work on the completion of the carbapenem- and/or colistin-resistant Enterobacterales (CCRE) survey under EURGen-Net, and the results will be published in 2023.

ECDC fostered inter-sectoral communication and cooperation at EU and Member State level to apply the 'One-Health' approach for the integrated detection and management of emerging, zoonotic, and vector-borne diseases through intensive communication and collaboration with sister agencies (EFSA and the European Environment Agency (EEA)), the European Commission and National Focal Points of the EVD network. In addition, the VectorNet project continued to monitor the distribution of arthropod vectors of human and animal pathogens. The genetic diversity of tick-borne encephalitis (TBE) virus in Europe was investigated through a targeted study and the epidemiological trends of TBE in the EU/EEA countries between 2012 and 2020 were also analysed.

In the area of microbiology, ECDC significantly strengthened public health microbiology structures and activities in Member States through the implementation of whole genome sequencing (WGS) and RT-PCR infrastructure and capacity-building. ECDC continued to manage the grants awarded to countries in September 2021 through the HERA incubator, to strengthen WGS and diagnostic infrastructures within countries' national public health programmes (more than EUR 77 million provided to 24 EU/EEA countries). The Agency also continued to collaborate with DG SANTE and HaDEA to award follow-up grants to countries under the EU4Health programme. The immediate objective was to reinforce countries' capacities for early detection and enhanced monitoring of emergent and known SARS-CoV-2 variants.

In 2022, a working group meeting was organised by ECDC on the development of a genomic typing-based signal for Invasive Meningococcal Disease (IMD). The experts invited provided input on the technical solution for uploading, analysing and visualising molecular data for IMD at EU level, as well as the system for joint investigations of signals and trends. They also developed a cluster definition for genomic typing-based signal to be used in the pilot project.

2.3 Training: provide adequate training opportunities, taking into account the changing environment for infectious disease prevention and control

Coordination of training programmes and support to Member States, the European Commission, and key stakeholders in public health is at the core of ECDC's mandate. In 2022, the Centre consolidated its offer of continuous professional development activities and continued to implement the Fellowship Programme (EPIET/EUPHEM), incorporating improvements in the administration of grants for hosting fellows. It also continued to manage the Mediterranean and Black Sea Programme in Intervention Epidemiology Training (MediPIET), running two cohorts in parallel.

The publication of the updated 'Core competencies in applied infectious disease epidemiology', and its translation into all EU/EEA languages, together with the self-assessment tool available through the ECDC Virtual Academy (EVA), is an important resource for professionals in the countries and for ECDC staff.

During the summer, the third triennial survey on capacity and training needs assessment in EU/EEA countries, (launched in 2021) was published. Of 30 countries invited to participate, ten responded to the Workforce Capacity Assessment Survey and twenty responded to the Training Needs Assessment Survey. Almost all respondent countries report that they are unable to recruit sufficient staff to work in communicable disease prevention and control, mainly due to lack of qualified applicants, and inadequate salary scales. The major problems identified for retention of staff were an ageing workforce, inadequate professional status, lack of promotion, lack of benefits, and inadequate salary scale. Only a few countries have a mechanism or legal instrument for workforce planning and development, or a regular census/registry of their public health workforce. Countries reported the greatest training needs in public health emergency preparedness, surveillance, and emergency response. Other topics identified as a priority were vaccination and vaccine acceptance, and antimicrobial resistance and healthcare-associated infections. Face-to-face learning was considered the most suitable for continuing professional development opportunities in communication, advocacy and laboratory systems and methods. For all other domains, respondents preferred a blended format, followed up with e-learning and face-to-face learning⁵.

The ECDC Virtual Academy is the platform hosting training activities and materials of ECDC training programmes, covering online courses available in open access, and courses and webinars for restricted audiences, through the Continuous Professional Development training portfolio.

In 2022, 24 fellows graduated from the ECDC Fellowship Programme and the EPIET-Associated Programmes (EAPs) (20 EPIET/EUPHEM from cohort 2020, three EAPs from cohort 2020 and one EAP from cohort 2019). At year's end, 73 fellows were enrolled (36 from cohort 2021 and 37 from cohort 2022).

The programmes are only possible thanks to the partnerships with public health institutes and laboratories located in EU/EEA countries, where fellows are employed as fully-fledged professionals, learning through service, to conduct surveillance, response and applied research in field epidemiology and public health microbiology. To strengthen and ensure the quality of training, several training site visits were carried out (Table 1). The programme delivers an introductory course and several other training modules to the fellows in collaboration with facilitators from the rich network of supervisors and alumni, and several fellows have also been able to participate in optional international assignments. A major challenge during 2022 was the need to deliver only virtual teaching due to the COVID 19 pandemic at the beginning of the year, and then to move to delivering the majority of training in hybrid format in order to adapt to the new epidemiological situation. Most of the training modules in the ECDC Fellowship Programme were delivered jointly with MediPIET (Table 2).

⁵ [Assessment of workforce capacity and training needs for the prevention and control of communicable diseases in the EU/EEA - Report on 2021 survey \(europa.eu\)](#)

Table 1. Training site visits for the ECDC Fellowship Programme in 2022

Institute	City, Country	Dates	Programme	Meeting type
Direcção-Geral da Saúde	Lisboa, Portugal	March	EPIET	Virtual
Instituto de Salud Carlos III	Madrid, Spain	June	EUPHEM	Virtual
Landeszentrum Gesundheit Nordrhein-Westfalen	Bochum, Germany	June	EPIET	on-site
Nemzeti Népegészségügyi Központ	Budapest, Hungary	June	EUPHEM	Virtual
Hospices Civils de Lyon	Lyon, France	June	EUPHEM	Virtual
Dept of Public Health Policy, School of Public Health, University of West Attica	Athens, Greece	June	EUPHEM	Virtual
Robert Koch Institut	Berlin, Germany	July	EUPHEM	Virtual
Santé publique France - cellule régionale Paca et Corse	Marseille, France	July	EPIET	on-site
Istituto Superiore Sanita	Rome, Italy	July	EUPHEM	on-site
Landesgesundheitsamt Baden-Württemberg	Stuttgart, Germany	July	EPIET	on-site
Landesgesundheitsamt Baden-Württemberg	Stuttgart, Germany	July	EUPHEM	on-site
Santé publique France - Département des Maladies Infectieuses	Paris, France	August	EPIET	on-site
Folkhälsomyndigheten	Stockholm, Sweden	August	EPIET & EUPHEM	on-site
Rijksinstituut voor Volksgezondheid en Milieuhygiëne	Bilthoven, Netherlands	August	EUPHEM	Virtual
Instituto Nacional de Saúde Doutor Ricardo Jorge	Lisboa, Portugal	August	EUPHEM	Virtual
Terveystiete ja hyvinvoinnin laitokset	Helsinki, Finland	September	EPIET	on-site
Slimību Profilakses un Kontrolē Centrs	Riga, Latvia	December	EPIET	Virtual

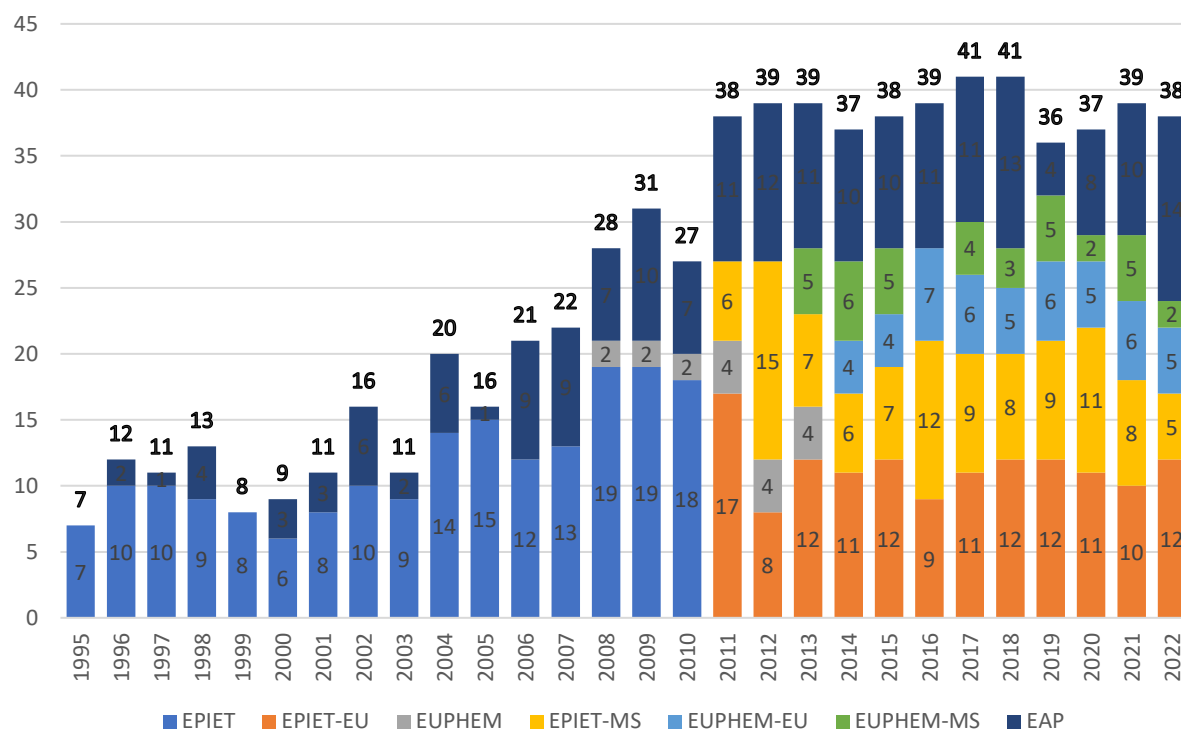
Information about projects in EU/EEA countries and international assignments carried out under the ECDC Fellowship Programme in 2022 can be found on ECDC's website, in the portfolios published for each graduating cohort on an annual basis⁶.

Table 2. Training modules of the ECDC Fellowship Programme in 2022

Module / Event	Cohort	Approximate hours	Dates	Venue
Biorisk and Quality Management	C2020 & C2021	16 hours	17 - 18 January	Virtual
Vaccinology 2022	C2020	26 hours	14 - 18 February	Virtual
Multivariable Analysis	C2021, C4(2021)	37.5 hours	14-18 & 30 March	Virtual
Time Series Analysis	C2020	40 hours	4 - 8 April	Rome, Italy & Hybrid
Mid-term Project Review 2022	C2021, C4(2021)	24 hours	20 - 22 April	Spetses, Greece & Hybrid
Introductory Course part 2	C2021, C4(2021)	32 hours	25 - 29 April	Spetses, Greece & Hybrid
Rapid Assessment and Survey Methods	C2021, C4(2021)	40 hours	6 - 10 June	Stockholm, Sweden & Hybrid
Management Leadership & Communication in PH	C2020	37 hours	13 - 17 June	Stockholm, Sweden & Hybrid
Project Review Module	C2020, C2021, C4(2021)	35 hours	29 Aug - 2 Sep	Lisbon, Portugal & Hybrid
Introductory Course	C2022, C5(2022)	95 hours	26 Sep - 14 Oct	Spetses, Greece & Hybrid
Introduction to 'R'	C2022, C4(2021) C5(2022)	10.5 hours	28 Nov - 1 Dec	RKI/Virtual
Time Series Analysis	C2021 C4(2021)	40 hours	7 - 11 Nov	Bilthoven, Netherlands & Hybrid
ESCAIDE	C2020, C2021 & C2022, C4(2021), C5(2022)	27 hours	22 - 25 Nov	Stockholm, Sweden & Hybrid
Outbreak Investigation	C2022, C5(2022)	35 hours	5 - 9 Dec	Berlin, Germany & Hybrid

The MediPIET, an inherent component of the EU Initiative on Health Security, is implemented in alignment with the ECDC Fellowship Programme (EPIET/EUPHEM) and had 32 fellows in training during 2022. With 12 of the 21 partner countries training fellows, the training of external participants proposed by the MediPIET Training Centre Forum and the establishment of a MediPIET alumni network will contribute to quality and sustainability. Full details are reported under Action Area 4.1.

⁶ For details of the work of the graduate fellows, cohort 2020, please see: www.ecdc.europa.eu/en/epiet-euphem/who-we-are/fellows-2020

Figure 5. ECDC Fellowship Programme: number of enrolled participants per cohort, 1995–2022

In 2022, fellows were still heavily engaged in activities related to the COVID-19 pandemic, including diagnostics, risk assessment, risk communication, preparedness, response and operational research in epidemiology and public health microbiology. Nine international assignments were carried out by EPIET and EUPHEM fellows in collaboration with GOARN, ECDC and WHO. These were related to COVID-19, mpox and cholera outbreak investigations, and to public health emergencies of an environmental nature (e.g. the tropical cyclone Gombe and the protracted complex humanitarian emergency in northern Mozambique and drought and food insecurity in the Greater Horn of Africa).

Working groups of NFPs for Training and members of the Fellowship Training Site (TSF) have furthered the implementation of the roadmap for changes in the Fellowship programme, with progress on analysis and actions in relation to international assignments, quality, under-represented countries, and curricular revision.

In 2022, ECDC continued to offer a vast array of training courses for Continuous Professional Development including instructor-led and e-learning courses. Many experts and teams at ECDC are involved in the production and delivery of these activities. Fifteen instructor-led courses and webinars were held for a total of around 480 participants. Twenty-two e-learning courses were also available on [EVA](#) – ECDC’s learning platform. In 2022, a total of 2 574 participants enrolled on e-learning courses. Almost 850 of them requested their certificate for participation. The two tables below list the training courses offered, for instructor-led and e-learning courses.

Table 3. List of instructor-led continuing professional development courses delivered by ECDC in 2022, by duration, delivery date, number of participants, overall average level of satisfaction and accreditation

	Name of training activity	Duration (hours)	Delivery date	Number of participants	Overall average satisfaction*	Accreditation ⁷ (Y/N)
1	EVD-LabNet: Laboratory diagnostic of emerging alphavirus	18 hours	28-30 March 2022	17	NA	Y
2	Course on advanced WGS of <i>Mycobacterium tuberculosis</i>	18 hours	3-5 April 2022	73	9.2	N
3	Peer feedback on writing and reviewing scientific abstracts: a field epidemiology focus	16 hours	26-27 April	20	8.1	N
4	Online workshop: how to lay the foundation for a national tuberculosis (TB) action plan or strategy.	16 hours	20-21 April 2022	10	8.9	N
5	2022 Summer School: emerging challenges from the COVID-19 pandemic in ethics, risk communication, and public health emergency preparedness and response.	12 hours	29 April, 3 and 4 May 2022 (half-days)	40	8.1	Y
6	Online workshops: Key considerations for ensuring continuity of TB care for refugees from Ukraine.	2 workshops x 8 hours each	21 June 2022 8 September 2022	27 total participants for all workshops	9.5	N
7	Train-the-trainer workshop for Western Balkan countries on raising awareness for prevention of Legionnaires' disease associated with touristic accommodation sites.	18 hours	13 and 14 September	2640	9.8	N
8	VectorNet: introduction to entomology for public health and animal health experts.	20 hours	21-23 September 2022	14	9.0	Y
9	Management of tuberculosis infection, including programmatic screening strategies.	16 hours	19-21 September 2022	29	9.0	N
10	Online workshops: implementing ECDC HIV, hepatitis B and C testing guidance, and STI testing standards in the EU/EEA.	4 workshops x 16 hours each	25-26 August 21-22 September 27-28 September 5-6 October	57 total participants for all workshops	NA	N
11	Cross-sectoral bio-risk awareness and mitigation training (BAM).	22 hours	4-6 October 2022	55	9.5	Y
12	Wetlab/drylab course on SARS-CoV-2 sequencing and bioinformatics	24 hours	8-11 November 2022	10	8.5	N
13	Course on control of multi-drug resistant microorganisms in healthcare settings 2022.	16 hours	8, 10, 15, 17 November (half-days)	47	8.9	Y
14	ECDC 2022 Winter workshop: Recovery – from lessons identified to lessons learned.	12 hours	29 November, 1 December, and 6 December 2022 (three half day sessions)	28	8.3	Y
15	Training of trainer course on vaccine acceptance - promoting vaccination acceptance and uptake – communication strategies for frontline health workers.	20 hours	7-9 December	32	8.5	N

* The overall satisfaction level is measured on a scale of 1 to 10, where 10 is considered best.

⁷ Agency for Public Health Education Accreditation (APHEA) or European Accreditation Council for Continuing Medical Education (EACCME)

EVA user engagement

In 2022, 2 113 new users joined EVA, bringing the total number of EVA users to 11 947, which represents an 18% increase compared to the previous year.

An increase in the number of logins to EVA was observed in Quarter 2, possibly in relation to the launching of the e-learning course 'Addressing Online Vaccination Misinformation' (June 2022) and the ECDC Summer School. The increase in Quarter 4 can be attributed to ECDC's Winter Workshop 'Control of Multi-Drug Resistant Microorganisms', the launch of the micro learning course 'Introduction to Infectious Disease Preparedness' a training-of-trainers course on vaccine acceptance and the start of cohort 2022 of ECDC's Fellowship Programme.

Table 4. Overview of available e-learning courses in 2022, with publication date, number of newly-enrolled participants in 2022, number of certificates, overall average level of satisfaction and accreditation

	Name of training activity	Publication date	Duration (hours)	Number of enrolments in 2022	Obtained certificates in 2022	Overall average satisfaction*	Accreditation ⁸ (Y/N)
1	Essentials of writing and reviewing scientific abstracts: a field epidemiology focus	Mar-16	2 hours	215	45	8.6	N
2	Introduction to outbreak investigation e-learning	Oct-18	2 hours	356	134	8.5	N
3	Influenza vaccination campaigns targeting healthcare workers	Oct-18	0,5 hours	16	6	8.6	N
4	Rapid Risk Assessment e-learning course	Mar-19	2-3 hours	189	67	8.5	N
5	Assessing and grading evidence in public health e-learning course (PRECEPT)	Apr-19	6-8 hours	56	16	8.6	N
6	Influenza bioanalytics e-learning course	Sep-19	3-5 hours	48	11	8.6	N
7	Cross-border sharing of public health data e-learning course	Dec-19	2-3 hours	41	13	8.3	N
8	E-learning on migration and health for health professionals	Mar-20	8 hours	134	13	8.7	N
9	E-learning on migration and health for law enforcement officers	Mar-20	8 hours	11	3	9.1	N
10	E-learning on migration and health for social workers	Mar-20	8 hours	21	3	9.0	N
11	E-learning on migration and health for trainers and coaches	Mar-20	3 hours	17	4	9.3	N
12	Antimicrobial stewardship e-learning course	Feb-21	0.5 hours	228	99	8.8	Y
13	E-learning course: introduction to designing in- and after-action reviews	May-21	2-4 hours	90	32	8.2	Y
14	Epidemic intelligence e-learning course	Sep-21	2-4 hours	395	218	9.0	Y
15	Understanding vaccine acceptance & strategies to increase vaccine uptake	Dec-21	0.5 hours	41	23	8.5	N
16	Contact tracing in the context of COVID-19 response*	Updated Dec 2021	1.5 hours	55	21	8.6	N
17	How to design a table-top exercise e-learning pilot course	Jan-22	0.5 hours	9	0	8.5	Y
18	How to design a Functional exercise e-learning course	Jan-22	1.5 hours	9	0	8.8	Y
19	e-learning for front-line managers on COVID-19 response to vulnerable populations (V2) *	Updated March-22	1.5 hours	91	18	9.0	N
20	Drivers and modifiers of antibiotic prescribing and infection prevention & control practices in healthcare settings (interactive lecture)	May-22	1.5 hours	Watching the video lecture does not require enrolment	NA	NA	N
21	Addressing online vaccination misinformation	June-22	4 hours	332	59	8.7	Y
22	Introduction to infectious disease preparedness micro learning	Oct-22	0.5 hours	220	65	8.5	Y

⁸ Agency for Public Health Education Accreditation (APHEA) or European Accreditation Council for Continuing Medical Education (EACCME)

** The overall satisfaction level is measured on a scale of 1 to 10, where 10 is considered best.*

Networking

Networking with European and global training partners has been substantial. In addition to the National Focal Points for Training and the Fellowship Training Site Forum, the European Commission, WHO, the Association of Schools of Public Health in the European Region (ASPHER), Africa CDC, the US Centres for Disease Prevention and Control (US CDC), the Public Health Agency of Canada, and the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) are all key stakeholders, with whom ECDC regularly shares experience.

In 2022, ECDC contributed with expert input to the Scientific Committee of the 11th TEPHINET Global Conference in Panama, where EPIET fellows presented their work, and to the Strategic Leadership Group which drives the Global Field Epidemiology Roadmap.

Meanwhile, ECDC and its five partners (US CDC, FAO, the World Organisation for Animal Health (WOAH), the Association of Public Health Laboratories (APHL) and WHO) continue to further the development and implementation of the [Global Laboratory Leadership Programme](#) (GLLP), an initiative for fostering and mentoring current and emerging laboratory leaders from all sectors (human, animal and environmental) to build, strengthen and sustain national laboratory systems. In 2022, the [GLLP Learning Package](#) (guidance for planning, development, implementation and evaluation of laboratory leadership programmes in any region, country, or educational institution in the world) was updated and supplemented with the GLLP Implementation Toolbox. This includes a GLLP Planning and Implementation Guide, Mentorship Guide and virtual and in-person course materials for 43 modules. By the end of 2022, the programme was in progress in twelve countries from four WHO Regions. The total number of participants engaged to date is 314, and they are supported in their leadership journey by 163 mentors.

Updates on current work and good practices between the Continuing Professional Development group and the Learning Solutions and Training group, Country Readiness Strengthening – Emergency Preparedness group and WHO Health Emergencies Programme were exchanged via online meetings. Respective approaches were shared in order to identify potential avenues for future work and collaboration.

2.4 Emergency preparedness: support countries in emergency preparedness and response, including through deployment of public health teams, as requested

One of ECDC's core tasks is to provide technical support to the EU-level response to communicable disease threats. Regulation (EU) 2022/2371 on serious cross-border threats to health and the International Health Regulations (IHR) continued to be the policy frameworks under which ECDC operates for emergency preparedness and response. In this area, ECDC strengthened its collaboration with the European Commission, Member States and CDCs globally, as well as working on relevant EU Joint Actions (SHARP, Healthy Sailing, Terror, Pandem), and with Organisation for Economic Co-operation and Development (OECD) and the European Observatory to support activities related to preparedness, response, and health system resilience.

The EU Early Warning and Response System (EWRS) is hosted by ECDC on behalf of the European Commission and serves as a key tool for supporting the EU-level response to serious cross-border threats to health. During 2022, ECDC maintained the function of EWRS and implemented further improvements to the platform, according to the needs of the European Commission and Member States. Development focused on the selective exchange module for contact tracing and support of medical evacuation. In addition, the EpiPulse platform, launched in 2021, was used extensively to facilitate collection of data and exchange of experts' experiences in communicable disease outbreaks. During 2022, the production of the Communicable Disease Threat Report was integrated into EpiPulse. Furthermore, the Whole Genome Sequencing (WGS) module was developed. ECDC also coordinated the harmonisation of investigations into multi-country public health events and threats and made protocols available to Member States to guide contact tracing activities.

During 2022, ECDC maintained the Emergency Operations Centre (EOC) at the highest alert level. The ECDC public health emergency plan, which enables the Director to mobilise resources to support the EU-level response to serious cross-border threats to European public health, continued to be in force and the Public Health Emergency (PHE) structure was in place throughout the year. During the spring and summer 2022, ECDC's Emergency Operations Centre supported three ongoing PHEs simultaneously (the COVID-19 pandemic, an outbreak of hepatitis of unknown origin in children and the mpox multi-country outbreak). Although PHE teams were organised to ensure the minimum of overlap for the experts and PHE managers involved, this experience was unique for ECDC and tested the limits of its capacity to develop risk assessments and guidance for multiple health threats.

The COVID-19 PHE was gradually de-escalated in 2022 and has now been at PHE Level-1- Maintenance phase since 9 June 2022. ECDC's workload related to the ongoing COVID-19 pandemic remained high throughout the

year. However, the number of events/urgent requests requiring immediate response has now significantly decreased and the focus has shifted towards longer-term monitoring, prevention and control of SARS-CoV-2. The internal PHE level de-escalation was implemented in two phases, gradually reducing PHE temporary structures and reintegrating COVID-19-related work into the regular organisational structure. COVID-19 internal task force meetings take place two-to-three times per week, depending on the need to coordinate and monitor ongoing work and address new incoming requests. ECDC continues to publish the weekly COVID-19 country overview reports with multiple surveillance indicators, as reported by EU/EEA countries, and has also incorporated the data reported by Western Balkan countries and Türkiye. Of the four dashboards active during the COVID-19 pandemic, three were gradually decommissioned during 2022, however the COVID-19 Vaccine Tracker continues to operate.

The PHE for hepatitis of unknown origin in children operated from April to July 2022. During this period, ECDC set up a case-based surveillance system with a common case definition and reporting protocol for countries to report cases. Results from the analysis of this data were periodically published in a series of joint ECDC-WHO Regional Office for Europe surveillance bulletins.

The PHE for mpox operated from May to October 2022. During this outbreak, emphasis was placed on producing materials for communication and community engagement, providing technical guidance for event organisers, contact tracing and regularly updating the risk assessment for EU/EEA countries. In addition, weekly webinars were organised with NFPs and the relevant community (international participation) to provide updates and share good practices. ECDC also collaborated closely with WHO's Regional Office for Europe, creating reporting under TESSy and producing a joint mpox surveillance bulletin.

During 2022, ECDC published several rapid risk/outbreak assessments (RRA/ROA) to support Member States and the European Commission in their preparedness and response to public health events. A total of 14 rapid risk assessments and threat assessment briefs were published in 2022; six were related to ongoing PHEs and eight to other outbreaks, four of which were joint ECDC-EFSA rapid outbreak assessments as part of the 'One-Health' approach in response to cross-border foodborne threats.

Another activity in which the Agency was engaged was the collating of lessons identified from the COVID-19 pandemic. An internal exercise, collecting lessons from ECDC's experts involved in supporting the work under the COVID-19 PHE, was followed by a collection and review of reports on COVID-19 lessons learned, published by various countries. In addition, six country visits were undertaken between May and September 2022 to discuss lessons identified at country level. Finally, an expert consultation meeting was organised with the Member States in September 2022, with the participation of over 70 EU/EEA experts, focusing on lessons learned from the COVID-19 pandemic.

Work continued on the implementation of in-action reviews (IAR) and after-action reviews (AAR). The protocol for focused evidence-based decision-making was used in AARs for decision-making in long term care facilities in Norway and Georgia. An additional AAR on evidence-based decision-making for school closures began in 2022 and will be completed in 2023 for three countries (Finland, Sweden, and Norway).

ECDC has launched a revision process of the RRA methodology, incorporating lessons learned from RRAs related to COVID-19, and taking into consideration the recommendations from the European Ombudsman and the amended ECDC mandate and the new Regulation on serious cross-border threats to health.

In 2022, three new literature reviews were initiated on topics related to emergency preparedness and response. One focused on conflicts and infectious disease, another was a follow-up study on the effectiveness of non-pharmaceutical interventions in controlling SARS-CoV-2, and a third documented the literature on lessons learned from the COVID-19 pandemic so far.

Training materials for e-learning courses were developed to support public health professionals in the EU/EEA and European Neighbourhood Policy countries to perform in-action and after-action reviews and outbreak investigations in the Member States. During the year, Emergency Preparedness and Response Support (EPRS) trained over 200 public health experts and trainees from EU/EEA countries and countries participating in the Health Security Initiative in ECDC risk assessment methodology. More detailed information on the training courses offered is provided under Action Area 2.3 Training.

During the year, ECDC's network of National Focal Points (NFP) for Preparedness and Response and the NFPs for Threat Detection, Early Warning and Response Systems and International Health Regulations were actively involved in regular webinars and in September 2022, their annual meeting was convened.

In collaboration with the European Commission's Joint Research Centre (JRC), ECDC maintained and curated the ECDC-JRC Response Measures Database (RMD), a repository of non-pharmaceutical interventions (NPIs) until 30 September 2022. The database is now being used for research and mathematical modelling work. Furthermore, ECDC established guidance and policy advice work for the design, implementation and monitoring of NPIs. In June 2022, ECDC hosted an expert consultation on the implementation and evaluation of non-pharmaceutical interventions. The [conclusions](#) from this consultation informed ECDC 2023 work planning and will be the focus of subsequent meetings with ECDC National Focal Points for Preparedness, Response, and Threat Detection.

In response to public health events, the Centre organised several field deployments. Nine infectious disease experts and two communication officers were deployed to Poland (10 deployments) and Romania (one deployment) in support of national authorities and WHO, to assist refugees from the Ukraine following Russia's invasion in February 2022. Two infectious disease experts were also deployed to Uganda to support the local DG ECHO office and EU delegation during an Ebola virus disease outbreak. In collaboration with DG SANTE, ECDC developed service-level agreements and plans for joint ECDC/DG ECHO field deployments for preparedness and response assignments, both inside and outside the EU. ECDC also prepared the arrangements for the operationalisation of the EU Health Task Force and the creation of its governance bodies, prior to the new ECDC mandate entering into force in December 2022.

In collaboration with EUROPOL, ECDC organised the fourth 'Biorisk awareness and mitigation training' (BAM2022) in Valencia (Spain), the first since the pandemic. The course was organised with a regional approach, involving countries according to their geographic location, to facilitate the establishment of 'preparedness partnerships' between neighbouring countries. The course was conceived as a training-of-trainers project, to provide competences that could be used by the countries to facilitate cascade training. At the same time, it was important that the participant-trainers played an active role as first responders to best integrate the competences acquired by the course with professional experience and expertise. The face-to-face training was supported by the ECDC Virtual Academy (EVA), which hosted the learning materials and supported the activities before, during and after the course. A total of 55 participants from 17 EU/EEA countries, and from Georgia and Moldova, and 17 facilitators/speakers/self-funded observers from different institutions attended/facilitated the training.

Strategic objective 2. Performance indicators

KPI	Baseline	Target	Means of verification	Frequency of verification	Result 2022
Average rate of participation in ECDC meetings and activities.	N/A	75%	Meeting statistics	Annual	58% ⁹
Rate of expectations met, and objectives fulfilled with meetings.	N/A	75%	End-of-meeting satisfaction survey.	Annual	92-100% satisfied ¹⁰
Percentage of satisfied country stakeholders with ECDC country support activities.	88%* <i>Note: the methodology will be revised in 2023, including the baseline.</i>	80%	Feedback gathered after country support activities.	Annual	86,5% of participants to selected interactions were very satisfied and satisfied
Number of scientific articles of public health relevance published by attendees of the ECDC Fellowship Programme (during and two years after graduation).	N/A	>50% increase compared to the 2-year period before entering the programme	Bibliometric analysis in PubMed, Scopus (ECDC library).	Annual	57% increase in scientific articles the two years following the ECDC Fellowship Programme compared to the two years prior to the programme
Satisfaction of participants with EVA specific training courses.	N/A	80%	EVA satisfaction surveys after completion of a training course.	Annual	All above 80%
Satisfaction with the EVA platform.	N/A	80%	Stakeholder survey	Biennial	82% consider the relevance of EVA as good or excellent
Satisfaction score for the relevance of ECDC's Continuous Professional Development (CPD) activities.	N/A	80%	Stakeholder survey	Biennial	78% consider relevance as good or excellent
Satisfaction score for the timeliness of ECDC's Continuous Professional Development (CPD) activities.	N/A	80%	Stakeholder survey	Biennial	73% consider timeliness as good or excellent
Satisfaction score for the scientific quality of ECDC's Continuous Professional Development (CPD) activities.	N/A	80%	Stakeholder survey	Biennial	82% consider scientific quality as good or excellent
Score of the perceived added value of ECDC's Continuous Professional Development (CPD) activities to the organisation/country.	N/A	80%	Stakeholder survey	Biennial	55% consider added value as good or excellent
Score of the perceived contribution of ECDC's Continuous Professional Development (CPD) activities to sustaining and/or increasing the public health services workforce capacity in the organisation/country.	N/A	80%	Stakeholder survey	Biennial	55% consider the contribution to increased capacity as good or excellent
Use of ECDC risk assessments: number of downloads of each RRA and ROA document from the ECDC website within 30 days of publication.	Non-PHE related RRAs average downloads within 30 days of publication 2019-2021: 190	180 downloads within 30 days of publication	ECDC webmaster	Annual	Non-PHE-related RRAs in 2022 (8/14): averaged 255 downloads within 30 days of their publication.
Proportion of requests for deployment or remote operational support - in response to cross-border public health emergencies - for which support is provided by the EU Health Task Force to Member States and the European Commission.	N/A	80%	Number of requests for a country visit or remote support.	Annual	90% (nine requests where support was provided out of 10 requests received).

⁹ Estimated on the basis of eight large disease network meetings (virtual and hybrid) with a total of 1 131 invitations.

¹⁰ Range estimated based on disease network meeting participants' satisfaction surveys (% of two highest satisfaction categories: e.g. good-excellent)

Strategic objective 3. Future outlook: prepare for the future through foresight and innovation assessments

3.1 Foresight: work with partners to identify and address key knowledge gaps and areas of uncertainty, and develop new multidisciplinary approaches to prevent and control infectious diseases

In 2022, the ECDC Foresight Programme formally kicked-off with an assessment of major drivers of change influencing future infectious disease threats in the EU/EEA, and their possible impact on public health. A multi-method approach was used with technical focus groups, an internal DELPHI survey¹¹, expert consultations and a workshop. Wide participation from experts and programmes inside ECDC, as well as from diverse external subject-matter experts and specialist practitioners, ensured a solid foundation for the assessment by reducing blind-spots and bias in the driver assessments, and promoting capacity building in futures and systems thinking. The driver assessment forms the basis for developing mid-term threat scenarios in the first half of 2023, and subsequent discussions on strategy implications and mitigating policies, with experts and decision-makers within and outside ECDC.

3.2 Engage: promote innovation through active engagement with EU research and innovation initiatives

A report on knowledge gaps and research priorities in respect of COVID-19 prevention and control, as perceived by experts working at ECDC, in national public health institutes, and in other collaborating partner organisations, was collated and presented to ECDC's Advisory Forum and delivered to the European Commission in 2022. Consultation with the DG for Research and Innovation (RTD) is planned for early 2023 on the format and content of the report, and to inform production of the next report, which will have a broader focus than just COVID-19.

Staff continued to engage with ongoing EU-funded research projects during 2022, including as members of advisory boards and scientific committees, to support exchange of emerging data and knowledge. In the pre-funding research phases, staff members also support EU funders in the development and evaluation of EU research calls.

ECDC led an initiative with its partners in the EU Agency Network on Scientific Advice (EU-ANSA) to develop a scientific seminar series to increase awareness of scientific activities among EU agencies, to stimulate cross-agency projects, and to offer a 'shared service' model for continuing professional development of scientific staff in all EU-ANSA affiliated agencies. Following the successful launch with a first seminar in 2021, ECDC coordinated the delivery of further seminars with other EU-ANSA affiliated agencies in 2022.

3.3 Support transformation: promote and contribute to digital health actions and support Member States in adapting, adopting, and exploiting new technologies for infectious disease prevention and control

ECDC aims to assess and make use of new technologies to modernise its approach to surveillance and risk assessment, in light of the infrastructural development fostered by the European Commission and the changes in clinical public health practice in Member States.

The new ECDC surveillance portal, EpiPulse, was used for the reporting and assessment of signals, events, and threats. In 2022, EpiPulse was also adapted to generate the daily and weekly Communicable Diseases Threats Reports (CDTR). The proof of concept for indicator-based surveillance (based on COVID-19) was completed and implementation for other diseases will start in 2023.

¹¹ A DELPHI survey is a structured communication technique or method, originally developed as a systematic, interactive [forecasting](#) method which relies on a panel of experts. It can be used to help reach expert consensus and develop professional guidelines.

In 2022, ECDC started a framework contract with a consortium to facilitate the transition of Member States towards automated surveillance from electronic health records. Thirteen countries started to implement surveillance of severe acute respiratory infections and 22 are ready to start with surveillance of bloodstream infections in 2023. Learning from the experience with COVID-19, ECDC supported the European Commission extensively to ensure that funding from the EU4Health programme addresses some of the key surveillance challenges in Member States. For example, a joint action (United4Surveillance), focusing on building Member States capacities for surveillance of pandemic-prone diseases, was launched by the European Commission with the support of ECDC.

During 2022, ECDC joined an EC-funded consortium to pilot the feasibility of carrying out AMR surveillance using the European Health Data Space (EHDS) infrastructure. The pilot will continue during 2023. Epidemic intelligence operations were further strengthened by the transition to the Epidemic Intelligence from Open Sources system as the main media aggregator tool and by further improving and automating event detection from social media thanks to a more advanced version of EpiTweetr.

Finally, in 2022, ECDC completed the takeover of the European Federation Gateway Service (EFGS), the technical backbone of the cross-country interoperability between proximity tracing apps used by Member States. Moreover, EWRS was further improved to accommodate standardised contact tracing data exchange between countries.

Strategic objective 3. Performance indicators

KPI	Baseline	Target	Means of verification	Frequency of verification	Result 2022
EU research and innovation engagement.	N/A	Knowledge gaps and research priorities identified for at least two topic areas.	ECDC content, outputs and reports.	Annual	Report on knowledge gaps and research priorities in respect of COVID-19 prevention and control, as perceived by experts working at ECDC, in national public health institutes, and in other ECDC collaborating partner organisations, was collated and presented to the ECDC Advisory Forum and delivered to the European Commission.
Comprehensiveness of eHealth-based surveillance implementation	Seven countries conducting eHealth surveillance of SARI	Twelve countries conducting eHealth surveillance of SARI, AMR, and one additional disease.	Project manager, content of specific contract, contract deliverables.	Annual	Thirteen countries participated in eHealth-based SARI surveillance. In total, 22 countries agreed to work on bloodstream infections and AMR eHealth-based surveillance from 2023. No additional diseases were included in 2022.
EpiPulse cases (EpiPulse cases rolled out as per plan).	EpiPulse cases not launched yet	Diseases included as per plan.	EpiPulse cases	Annual	Proof of concept delayed, roll-out postponed to 2023.
Use of EpiPulse (Number of posts uploaded to the platform).	EpiPulse launched in June 2021. 134 per month in 2021, including previous platform EPIS.	Annual increase in number of posts by 5%.	EpiPulse events and documents, data extraction.	Annual	192 per month (median), representing a 43% increase on 2021.
Percentage of diseases with integrated operational WGS surveillance schemes, as per strategic framework and annual planning.	TBC	>60%	EpiPulse	Annual	WGS operational for 60% of diseases
Introduction of AI into Epidemic Intelligence processes	N/A	One AI process per year.	Epidemic Intelligence group	Annual	Automation of weekly reports for mpox. Procurement of script templates for automated production of updates for threats under long term monitoring.

Strategic objective 4. Increase health security in the EU through strengthened cooperation and coordination between ECDC and partners in non-EU countries

4.1 Neighbourhood: together with partners, develop and implement a comprehensive programme to support the Western Balkans, Türkiye and ENP partner countries to strengthen their infectious disease prevention and control systems and public health workforce

With external financial assistance from the European Commission Directorate-General for Neighbourhood and Enlargement Negotiations (DG NEAR) under the Instrument for Pre-accession Assistance (IPA), ECDC continued to implement the project '[Preparatory measures for the participation of the Western Balkans and Türkiye in the European Centre for Disease Prevention and Control with special focus on One-Health against AMR and enhanced SARI surveillance, 2020 – 2024](#)' (ECDC-IPA6 project). The implementation of project activities and the work plan for 2022 was structured around three work streams, as set out below.

Work Stream 1. Preparatory measures for the participation of the Western Balkans and Türkiye in ECDC (systems, networks, activities)

To support national authorities in implementing EU acquis on serious cross-border threats to health, in particular, by strengthening surveillance, preparedness, and microbiology laboratory system capacities supporting public health, the experts from IPA beneficiary countries were invited to participate as observers at ECDC national focal point forums and meetings. More specifically, 226 experts from the Western Balkans and Türkiye attended 28 meetings during 2022, including seven capacity-building events. One of the flagship regional project events was the '[ECDC Train-the-trainer workshop for the Western Balkans on raising awareness for the prevention of Legionnaires' disease associated with touristic accommodation sites](#)' organised on 13–14 September 2022 in Podgorica, Montenegro. The [ECDC leaflet for managers of tourist accommodation on how to reduce the risk of Legionnaires' disease](#) is now available in all languages pertinent to the IPA beneficiaries.

In the area of surveillance, ECDC discussed surveillance data reporting of mutually-agreed diseases to TESSy, as per ECDC reporting standards and EU requirements, bilaterally with each beneficiary. The feedback provided by ECDC will be followed up to better prepare them to meet future obligations in the area of communicable disease surveillance and control.

The year 2022 saw further integration of the Western Balkans and Türkiye into ECDC networks and structures. More specifically, the integration of the national authorities of IPA beneficiaries:

- as observers in the National Focal Points (NFP) for Viral Respiratory Diseases network and its associated networks - EISN, ECOVID-Net, E-SARI-Net;
- as observers in the NFP for Emerging and Vector borne Diseases network
- as observers in the NFP for Antimicrobial Resistance network and the European Antimicrobial Resistance Genes Surveillance Network (EURGen-Net) (ongoing in 2023)
- into ECDC's Stakeholder Relations Management system for direct management of country contacts by the national ECDC correspondents in the Western Balkans.

The overview of project achievements, country needs for ECDC support in different areas of cooperation, and the way forward were discussed by the key national stakeholders during the annual meeting of the national ECDC correspondents from the Western Balkans and Türkiye, held on 23 November 2022.

Work Stream 2. Advancement of 'One-Health' responses against AMR in the Western Balkans (ECDC/EFSA)

Following ECDC's open call for tenders [OJ/2022/DIR/23891- Country Support to Advance One-Health Responses against Antimicrobial Resistance in Western Balkans](#), the framework contract has been concluded with the external service provider to contribute to the advancement of a 'One-Health' approach against AMR in the Western Balkans through (i) identification of gaps in the current national AMR strategies and action plans; (ii) development of country roadmaps; (iii) support in the development of electronic surveillance of AMR; and (iv) awareness-raising initiatives.

Work Stream 3. Enhancing SARI surveillance in Western Balkans

To support the implementation of fit-for-purpose surveillance systems in the Western Balkans and engage in vaccine effectiveness studies, ECDC included all six Western Balkan candidate countries and potential candidates in the E-SARI-Net activities. As a result, in 2022 all of them produced specific SARI surveillance protocols, describing their current infrastructure, capabilities and surveillance practices and their plans for moving to case-based electronic data collection. Data collection and sharing strategies using a standardised TESSy reporting protocol enabled comparability of the data with EU/EEA. ECDC technical support to national authorities continued through EpiConcept, to address training needs and support data submissions to TESSy and production of routine surveillance outputs. The aim is to enhance the countries' capacities to implement protocols, validate data and contribute to ECDC activities, as per standards applicable to EU Member States.

In 2022, ECDC delivered the 2022 work programme for the EU Initiative on Health Security (HSI), which is a five-year programme to enhance the public health preparedness and response capacities of the European Union enlargement and European Neighbourhood Policy (ENP) partner countries, funded by DG NEAR. The programme was implemented through three interconnected work packages (WP):

WP1: Field epidemiology workforce development through the Mediterranean and Black Sea Programme for Intervention Epidemiology Training (MediPIET)

In 2022, MediPIET organised several training courses for two cohorts. WP1 activities kicked off in March with an online 'Multivariable Analysis Module and Inject Day'. The first face-to-face training activity – the 'Project Review Module' – was held in Greece in April, followed by a hybrid 'Introductory Course Part 2'. In June, MediPIET hosted a hybrid training module in Stockholm on 'Rapid Risk Assessment and Survey methods'. MediPIET fellows and supervisors, together with EPIET, EUPHEM and PAE fellows, participated in the 'M6 - Project Review Module' in August.

MediPIET Cohort 5 formally kicked-off, with 16 fellows from 11 partner countries in September. The cohort's first activity was the 'Introductory course 2022', which took place in Spetses, Greece. MediPIET also organised a 'Times Series Analysis module' in the Netherlands. Two further events, the MediPIET 'Operational Research Inject Days' and an 'Introduction to R statistical software' course, were held virtually. WP1 wrapped up the year with an 'Outbreak Investigation module' for MediPIET Cohort 5, which took place in Berlin, Germany.

The WP1 team also organised the participation of experts from the MediPIET network at ECDC's Summer School 2022 in April, an online course which highlighted and discussed some of the emerging challenges from the COVID-19 pandemic in terms of ethics, risk communication, and public health emergency preparedness and response. In the following month, ECDC hosted a regional workshop of the MediPIET Training Centres Forum and MediPIET NFPs and MediPIET alumni fellows from Cohorts 1-3 met to discuss and initiate the setting up of the 'MediPIET Alumni Network' (MediAN). A virtual site appraisal for the National Centre of Disease Control in Libya took place in June. The institute met all the eligibility criteria and was thus accepted as an acknowledged MediPIET training site. The Advisory Board of the Training Programs in Epidemiology and Public Health Interventions (TEPHINET) officially approved MediPIET as a full member in November. Finally, ECDC organised the MediPIET annual scientific event on ECDC's premises during ESCAIDE (the European Scientific Conference on Applied Infectious Disease Epidemiology). The ESCAIDE Conference also hosted a MediPIET side session entitled 'The role of national FETPs in strengthening countries' capacities for infectious disease prevention and response'.

WP2: Epidemic intelligence, risk assessment, preparedness and response

In March 2022, ECDC hosted a virtual workshop entitled 'Public Health Emergency Operations Centre: challenges and training needs'. The event brought together national experts from several ENP partner countries, as well as three representatives from WHO. The aim of the event was to present ECDC's experience of operating a public health emergency operations centre and to share best practices and experience with the partners. In the following month, a basic training course entitled 'Epidemic Intelligence and Rapid Risk Assessment' took place. This course covered all the procedural steps, from early detection of a signal to the final risk assessment of a public health event.

In September 2022, an evidence-based decision-making After-Action Review (AAR) was organised in Tbilisi, Georgia. ECDC also organised and hosted a workshop on risk communication in the same month. The aim of this event was to highlight and discuss approaches to risk communication using the emerging challenges from the COVID-19 pandemic and other examples to highlight the importance and application of risk communication in the successful management of infectious disease outbreaks. In October, representatives of Georgia and Moldova took part in the 'Cross-sectoral bio risk awareness and mitigation' training course, organised by ECDC and Europol in Valencia, Spain. WP2 wrapped up the year with a four-day basic training course in Epidemic Intelligence and Rapid Risk Assessment, which was held in Yerevan, Armenia, for public health professionals responsible for improving response measures to infectious disease outbreaks.

WP3: Integration into ECDC systems, knowledge sharing and networking

In January, ENP partner countries that had nominated experts participated in the 'Monthly Webinar for NFPs for Preparedness, Response and Threat Detection'. In February and March, bilateral meetings were held with both Libya and Palestine* to agree on the report on public health emergency preparedness and response capacities and capabilities and to discuss MediPIET and key areas of cooperation within the EU Initiative on Health Security. In March, ENP partner countries were also invited to the 11th annual meeting of the Food and Water-borne Diseases and Zoonoses network (FWD-Net). Georgia and Israel took part in the monthly webinar for NFPs for Preparedness, Response and Threat Detection' in April. Lastly, in November, ECDC hosted the annual meeting of the national ECDC correspondents in the ENP partner countries and the MediPIET NFPs in Stockholm, Sweden. The meeting provided an opportunity for participants to look back at the regional cooperation activities under the EU Initiative on Health Security and to discuss the outcomes and achievements of 2022 and planned activities for 2023.

** This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.*

4.2 Major CDCs: increase ECDC's collaboration with major centres for disease prevention and control

In 2022, ECDC held the second in-person meeting with its focal points at major Centres for Disease Control (CDCs) that are also members of the network of major CDCs. Participants shared information on how bilateral and multilateral international cooperation is organised within each organisation, and the changes being implemented based on the lessons learned post-COVID-19 outbreak. The network of major CDCs meets three times a year via teleconference and once a year in-person. Additional meetings can take place, depending on the needs, as was the case during the COVID-19 pandemic.

There were several bilateral meetings arranged between ECDC and CDCs with which the Agency has signed Memoranda of Understanding (MoU). The aim of these meetings was to discuss and agree on future joint action, and to monitor existing joint action plans. ECDC also had meetings with potential new partners such as Australia, Brazil, Gulf Centre for Disease Prevention and Control (Gulf CDC), India and Japan, to exchange information and experiences on COVID-19 and to discuss the possibility of establishing bilateral relations in the form of an MoU.

In 2022, an external evaluation of ECDC's work with major CDCs was carried out, to help ECDC develop a strategic approach to future bilateral and multilateral collaboration with other CDCs. As a next step, an action plan will be developed to implement the recommendations of the evaluation.

In 2022, ECDC worked closely with Africa CDC on the implementation of the four-year technical partnership project entitled 'EU for Health Security in Africa: ECDC for Africa CDC' with funding from the European Commission's Directorate-General for International Partnerships (DG INTPA). The overall aim is to contribute to health security in Africa, by sharing EU practices and strengthening Africa CDC's capacities in preparedness, surveillance and response to health threats posed by communicable diseases.

The project's inception phase (initially planned for one year) was extended, due to challenges posed by the COVID-19 pandemic, to allow colleagues to carry out additional needs assessments, and the implementation phase was officially launched in August 2022 at the third Project Steering Committee. This year also saw the first exchanges of project counterparts for face-to-face experience-sharing.

In the area 'Preparedness and outbreak response', Work Package 1 team finalised a risk-ranking exercise to prioritise diseases, resulting in the development of a risk-ranking tool for dissemination in 2023. Many events took place, including a simulation exercise management training course for staff at Africa CDC's headquarters and its regional collaborating centres (RCCs) in Addis Ababa, Ethiopia; an in-action review of response to the cholera outbreak in Lilongwe, Malawi, and an after-action review management training course in Bishoftu, Ethiopia where experiences were shared in the context of emergency response task forces.

In the area 'Indicator- and event-based surveillance', Work Package 2 team participated in the revision of Africa CDC's event-based surveillance framework and an Africa CDC workshop on antimicrobial resistance surveillance. Closer collaboration was also developed for monitoring mass gatherings using tools such as the Epidemic Intelligence from Open Source platform. Work Package 2 colleagues co-hosted a side event on digital health at the International Public Health Conference in Africa (CPHIA) in Kigali, Rwanda, which was also attended by the Directors of ECDC and Africa CDC, who jointly delivered the keynote speech.

In the area 'Continental public health workforce development', Work Package 3 co-developed a survey to map field epidemiology training programmes on the African continent and organised a joint learning management system workshop to exchange experiences on the development of the ECDC Virtual Academy (EVA). Project colleagues jointly participated in ESCAIDE. Furthermore, in December ECDC's Director and Africa CDC's Head of Public Health Institutes and Research delivered a joint presentation at the annual meeting of the International Association of National Public Health Institutes (IANPHI), where ECDC's Director also had bilateral meetings with colleagues from the Public Health Agency of Canada and the Gulf CDC.

In the area 'Horizontal activities', both agencies agreed on a project communications and visibility plan. The logical framework and 2022–2024 workplan for the project was approved; data-sharing and protection agreements were advanced and the project's first interim progress report was submitted and approved by the funding authority.

4.3 Coordination: ensure seamless coordination with EU and international partners to achieve common objectives

During the past year, ECDC has further strengthened its coordination and collaboration with key partners, both at the EU and global level.

Actions included close cooperation with the EU institutions and bodies, particularly with the European Commission (DG SANTE, DG HERA, DG ECHO, DG NEAR, DG INTPA, DG JRC) and the European External Action Service (EEAS) to ensure ECDC European and international actions are coherent with the EU priorities and policy objectives.

In 2022, preparations got underway to define the scope and purposes of a Memorandum of Understanding between DG HERA and ECDC, to be finalised in 2023. The aim is to coordinate the work of the parties in support of health emergency preparedness and response and to avoid duplication of activities. Areas of cooperation will include intelligence gathering and assessment of health threats, modelling and foresight activities, preparedness and response capacities, and planning, as well as the international dimension.

ECDC continued its regular cooperation with the European Parliament, and in particular with the Committee on the Environment, Public Health and Food Safety (ENVI). Interactions also took place with the Special Committee on the COVID-19 pandemic (COVI) and with other Committees of the European Parliament relevant to ECDC's work. The annual hearing of the ECDC director in ENVI took place on 22 March 2022.

In addition to the numerous questions related to the ongoing COVID-19 pandemic, topics of interest for the Members of the European Parliament were the implications of ECDC's reinforced mandate, other health emergencies such as the outbreaks of mpox, Ebola in Uganda and cases of hepatitis of unknown aetiology in children, antimicrobial resistance, substances of human origin (SoHo) and the new European Health Data Space (EHDS).

ECDC also continued to inform the Council of the European Union of ongoing health emergencies during the informal and formal Employment, Social Policy, Health and Consumer Affairs Council (EPSCO) meetings.

Collaboration with other EU agencies, such as the European Medicines Agency (EMA) and the European Aviation Safety Agency (EASA), related to COVID-19 was intensified during 2022. For the MoU with EMA, a new technical annex will be adopted in 2023 to provide a framework for the agencies to collaborate on post-authorisation monitoring of vaccines. EASA and ECDC agreed to replace their framework agreement, concluded in 2011, with an updated set of arrangements which is currently being finalised. The MoU will foster cooperation between both parties within their respective mandates to ensure holistic, harmonised and evidence-based prevention and response to sanitary threats and outbreaks. The areas of collaboration include a regular exchange of information and the sharing of relevant ECDC output, such as the weekly Communicable Disease Threat Report (CDTR), potential risk assessments or technical guidance. Furthermore, the EASA-ECDC Aviation Health Safety Protocol, first published in 2020 was updated in 2022.

ECDC continues to actively participate in the annual European Health Forum Gastein. In 2022, ECDC organised a session on the ethical dilemmas encountered during the COVID-19 pandemic, with a range of speakers at Member State, EU and global level. The session was highly appreciated by the audience, as evidenced in the follow-up survey.

In 2022, ECDC's close collaboration with WHO continued. ECDC and WHO's Regional Office for Europe held several coordination meetings, including one at director level. The WHO Regional Director for Europe visited ECDC to discuss and align the strategic priorities of the two organisations in light of the amended ECDC mandate and WHO Regional initiatives. ECDC's Director was invited to attend the 72nd session of the WHO Regional Committee for Europe and took part in several high-level ministerial sessions. The strategic dialogue and emergence of new areas for cooperation triggered preparations for a revision of the Memorandum of Understanding between the two organisations, to be concluded in 2023.

At a technical level, ECDC and WHO's Regional Office for Europe have worked very closely and jointly implemented or collaborated on 67 activities within the different disease programmes. In addition, ECDC initiated contact with the WHO Hub for Epidemic and Pandemic Intelligence and discussed areas of mutual interest such as on epidemic intelligence, public health training and surveillance. A formal cooperation framework will be agreed in 2023.

Strategic objective 4. Performance indicators

KPI	Baseline	Target	Means of verification	Frequency of verification	Result 2022
Stakeholder satisfaction with ECDC activities by the Western Balkans and Türkiye.	N/A	80%	Stakeholder survey	Biennial	74% satisfied or very satisfied (with the work of ECDC)
Rate of implementation of activities in the annual work programme, offered to ENP partner countries.	70%	80%	EIC statistics	Annual	85%
Number of MediPIET cohorts trained by ECDC.	0	Three	Webpage of the EU Initiative on Health Security or MediPIET.	Annual	0 (graduation of one cohort to take place in 2023)
Number of new cooperation agreements with major CDCs signed.	Three	N/A	Agreements signed	Annual	0
Goal of having four teleconferences and one face-to-face meeting per year of the network of major CDCs achieved.	Four teleconferences and one face-to-face meeting organised	Four teleconferences and one face-to-face meeting organised or attended (depending on ECDC's role).	Meeting reports	Annual	3 TCs and 1 F-2-F
Development/review of training packages and content at Africa CDC.	N/A	N/A	Joint technical reports on workshops and exercises; project steering committee reports (biannual); ECDC4Africa CDC workplan.	Annual	Partially achieved. Mapping of FETPs, creation of e-learning content, development of SimEx training handbook, and planning of data analysis training ongoing
Percentage of requests from the European Commission and Member States answered within agreed timeline.	100%	95%	Chrono	Annual	100%
Percentage of requests from the European Parliament answered within agreed timeline.	100%	95%	Chrono	Annual	100%
Satisfaction of participants attending ECDC session at the European Health Forum, Gastein.	80%	80%	External survey (EHFG organisers).	Annual	96% (Survey result: 4.8/5)
Rate of implementation of activities in the annual joint action plan with WHO Regional Office for Europe.	75%	90%	Joint action plan with WHO Regional Office for Europe.	Annual	87% (includes only planned activities, not ad hoc or continuous)

Strategic objective 5. Transform the organisation to the next generation ECDC

5.1 Integrated management framework: increase organisational effectiveness and efficiency through improved processes and enhanced monitoring of organisational performance

ECDC has an Integrated Management Framework (IMF) document in place, describing the state of the system's four pillars - governance, organisational performance management, quality management, and internal control framework - and two cross-cutting areas - innovation and change management. The objectives of the IMF are to improve the clarity and transparency of the framework in place, while ensuring that it is not overcomplicated and minimising its administrative burden. It will equip all ECDC staff with an easy access to the documentation describing how ECDC is run and how activities are carried out at the Centre, and will ensure that ECDC's management is provided with the information needed to take well-informed and timely decisions. The IMF working group was established to support the further development and improvement of the IMF and its main task in 2022 was to support the Executive Office in developing the IMF Roadmap 2022–2027. The IMF Roadmap was developed to define the improvements needed for the ECDC IMF, so that the gaps between the current state of play and the IMF envisioned for 2027 can be addressed. The document describes the vision for the IMF in 2027, the gaps identified and the actions needed to achieve the 2027 vision. In addition, the document provides a review of the resources needed to implement the necessary changes.

In 2022, the instructional document management system within this framework was further developed, and work continued to review and optimise existing processes.

In the coming years the Agency will implement an ISO 9001:2015-based quality management system. A pilot project related to quality management was implemented in the Executive Office, with the support of external experts.

In accordance with the Integrated Management Framework, ECDC successfully completed the assessment and initial development of its IT systems and architecture for support and steering activities. In 2022, the individual projects continued in relation to a business process management tool, an action plan tool, and e-workflows for procurement and these will continue in 2023. In 2022, a large area of work was the selection, initiation and development of the new ECDC planning and monitoring system (PRIME), which will continue in 2023. This system will replace the present management information system (MIS) in 2024.

As part of the improvements to the Internal Control Framework (ICF) in place in ECDC, new survey-based indicators were introduced to be able to better assess the implementation of the ICF. The first ECDC internal control survey was also performed, and the results were integrated into the assessment performed for the CAAR 2022.

5.2 Engaged staff: recruit and retain capable, motivated, and resilient staff

The year 2022 was characterised by a significant volume of recruitment, the orientation and integration of new staff, support services to ensure the well-being of personnel and significant projects to improve HR services in the long term. A total of 56 posts were filled during the year. Yet, despite the high number of recruitments, the Centre managed to keep the vacancy rate below the 5% target at the end of 2022.

A first draft of the 'People Strategy' was developed. The strategy will guide the modernisation and consolidation of ECDC's HR management services in the years to come. Individual projects within the strategy are already underway, such as activities linked to health and well-being in the workplace, while others were finalised in 2022 (e.g. e-recruitment tool and online induction programme.) The new orientation and integration programme provides a portfolio of essential training courses in all areas of the Centre's activities for new staff, and also serves as a refresher training course for existing staff.

With the return of staff to the office in 2022, albeit in a hybrid working mode, support was provided for the purposes of 're-connecting' in the form of team 'retreats' throughout the organisation.

Furthermore, the implementation of the newly adopted 'Policy on Learning for Continuous Professional Development' represents a positive step towards enhancing the area of learning and development at the Agency. A library of competencies has also been created, providing a tool for staff and managers in relation to staff development (a key output of the ECDC Future Competencies project). The administrative, governance and IT libraries of competencies were finalised during 2022, and the operational competencies are expected to be ready by mid-2023.

The Agency further enhanced its support for staff learning and development by increasing the individual allocation for training and facilitating staff access to e-learning platforms (EU Learn, LinkedIn Learning and the ECDC Virtual Academy).

5.3 Stakeholders and external communication: enhance the transparency, visibility and availability of ECDC's outputs

ECDC's vision for its communication activities is to help target audiences make informed decisions about their health, and the health of others. It does this by actively engaging with them and providing relevant, easy-to-understand content on infectious diseases epidemiology, prevention, and control, in collaboration with Member States, the European Commission and other partners across the EU and globally.

The year 2022 was the first year of implementation for the recently-developed ECDC communication policy 2022–2027, targeting audiences such as health professionals, policymakers, the general public, the media and ECDC staff. Throughout 2022, ECDC tailored its communication outputs to reach target groups in different ways, focusing on their needs and levels of interaction (e.g. awareness, engagement, and cooperation.)

While ECDC continued to receive a great deal of attention in the media, social media and through its websites, there were noticeable downturns in some of the communication indicators, which is not unexpected and results from the natural evolution of the COVID-19 pandemic and its impact on the interest of ECDC's target audiences. Nevertheless, all figures remain significantly higher than those from before the pandemic. This trend was already seen in 2021 and is expected to continue in the near future.

Risk communication

On the occasion of World Tuberculosis Day, World Hepatitis Day, World Hand Hygiene Day, World Field Epidemiology Day, Flu Awareness Week, European Immunisation Week and World AIDS Day, ECDC used the opportunity to inform interested public and technical experts of the Agency's work and shape the respective risk communication messages. As in previous years, ECDC, in collaboration with the WHO Regional Office for Europe published joint communication outputs on tuberculosis, HIV/AIDS, and antimicrobial resistance, as well as regular joint news items.

To support world health days and ongoing public health issues such as mpox, COVID-19, and hepatitis of unknown origin, ECDC developed risk communication materials and campaigns, using traditional media, social media, videos, toolkits, infographics, and other content types that were shared with partners and stakeholders across the EU and could be easily adapted to local languages and practices.

European Antibiotic Awareness Day (EAAD) was marked on 18 November 2022 with a digital campaign¹² and in partnership with the World Antimicrobial Awareness Week. A digital event¹³ was held on 17 November with more than 300 participants, bringing together experts from the human and animal health sectors, as well as representatives from patient and professional organisations.

A total of 34 social media ambassadors from 24 EU/EEA countries collaborated to highlight key EAAD messages on the prudent use of antibiotics and antibiotic resistance in their national languages, accounting for over 115 Instagram stories. Other activities included the development of videos to counteract the top misconceptions concerning antibiotics and antimicrobial resistance; an updated infographic and an animation highlighting the latest figures on the burden of antimicrobial resistance in humans; media relations; web updates, and a global Twitter storm together with partners across the globe. As in previous years, a communication toolkit was shared with partners and stakeholders in October, including the latest data and editable materials.

Training courses with a risk communication component were also implemented as part of the summer school, the EU Initiative on Health Security and the ECDC Fellowship Programme training module on management, leadership and communication in public health. These training courses included a theoretical base and placed the participants in scenarios where they needed to apply key risk communication principles to address a wide number of target groups.

¹² <https://antibiotic.ecdc.europa.eu/en/european-antibiotic-awareness-day-eaad-2022>

¹³ <https://www.youtube.com/watch?v=3A2Q7Hr9Dvw&t=4185s>

Figure 6. Examples of risk communication content

Press and media

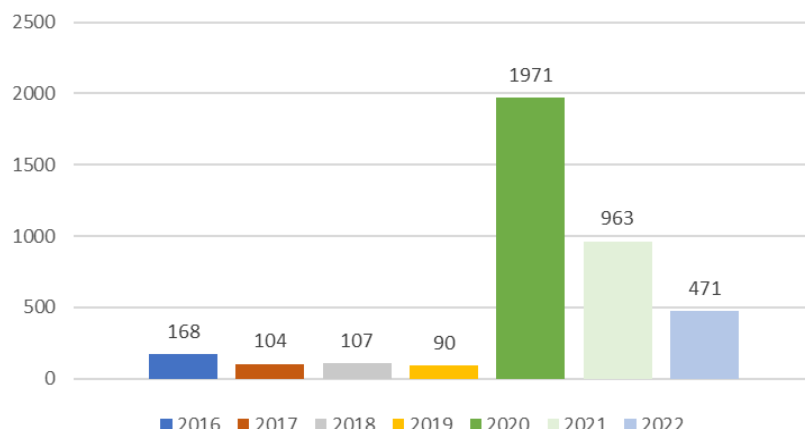
In 2021, ECDC continued to engage with journalists across the EU and internationally regarding the COVID-19 pandemic, influenza, mpox, HIV/AIDS, vaccination issues and antimicrobial resistance and many other topics.

The press office received 471 media requests in 2022 (50% fewer requests than in 2021) from various media sources. These requests ranged from interviews with experts to written replies. During the course of the year, experts gave 50 media interviews, and the press office provided 365 written responses.

The requests originated from a wide range of sources – from major international news outlets and wire agencies to fact-checking organisations. Throughout the year, the largest number of requests came from Politico (25), Reuters (20), BBC (17), The Daily Telegraph (14), Agence France-Presse (9) and Deutsche Welle (4).

ECDC was continuously present in mainstream media during 2022, garnering a total of 24 460 references in high-quality European and international media. Most of the coverage was neutral or positive and included content related to COVID-19, vaccination issues, mpox, hepatitis, influenza, and antimicrobial resistance. A high volume of articles and other outputs were published in Italy, Greece and Portugal. In total, over 220 000 were published in all media mentioning ECDC and COVID-19.

In 2022, ECDC held four press conferences with journalists participating from most EU/EEA countries. These press conferences focussed on topics such as European Immunisation Week, *Salmonella*, hepatitis, antimicrobial resistance, and HIV/AIDS. The ECDC press and media team added a further 68 journalists to its journalist database during the year.

Figure 7. Number of media requests received

Social media

The number of followers on ECDC's corporate Twitter account (@ECDC_EU) grew by 11 204, up from 94 560 followers in 2021, to 105 764. New followers to ECDC's outbreaks Twitter account (@ECDC_Outbreaks) grew by 2 399, reaching 5 881 in total. ECDC now has 163 897 followers across nine Twitter accounts, which represents an 11% increase on 2021.

The top performing tweets from @ECDC_EU in terms of impressions in 2022 included the maps in support of the Council Recommendation for a coordinated approach on travel measures (between 150 000 and 180 000 impressions each), the reclassification of the BA.4 and BA.5 variants to variants of concern (183 000), the second COVID-19 booster recommendations (345 000) and the ECDC Rapid Risk Assessment on Omicron, published in January (67 000 impressions).

The number of followers on the ECDC Facebook page continued to increase, reaching a total of 273 361 (4% increase). Most of the ECDC Facebook fans and followers come from Italy, Germany, Spain, Romania and Portugal. A total of 209 posts were published on Facebook (29% decrease), reaching over 10 million users. The top content on this platform in terms of reach included news about the first cases of mpox in Europe (218 000), the maps in support of the Council Recommendation on a coordinated approach to travel measures (regularly reaching around 170 000), an update on the outbreak of *Salmonella Typhimurium* linked to chocolate products (165 000), and news about *Langya henipavirus* in China (150 000).

In 2022, there were 330 LinkedIn page updates (10% decrease), reaching 1.5 million users, gaining 45 000 clicks, 20 000 reactions (likes), 212 comments and 4 000 shares. The follower base increased from about 10 000 to over 51 000. The top performing posts were the infographic on the human health burden of antimicrobial resistance (77 000 reach, 1.9 million reactions, 26 comments, 374 shares and 2 200 clicks), a GIF on the latest data on antimicrobial resistance (24 600 reach, 541 reactions, eight comments, 162 shares, 334 clicks), and the increase of COVID-19 cases in China (21 500 reach, 541 reactions, eight comments, 162 shares, 326 clicks).

Figure 8. Annual increase in followers across social media accounts

Channel	Accounts	December 2021 Followers	December 2022 Followers
Twitter (followers)	ECDC_EU	94 560 (+21 246)	105 764 (+11 204)
	ECDC_TB	3 639 (+361)	3 840 (+201)
	ECDC_Flu	7 584 (+593)	7 869 (+285)
	ECDC_VPD	6 463 (+575)	6 720 (+257)
	ECDC_HIV/AIDS	3 185 (+246)	3 403 (+218)
	ECDC_Outbreaks	23 482 (+3 044)	25 881 (+2399)
	EAAD_EU	4 368 (+247)	4 638 (+270)
	ESCAIDE	2 272 (+93)	2 586 (+314)
	ECDCPHT	2 827 (+355)	3 196 (+369)
Facebook (followers*)	ECDC	264 439 (+30 420)	273 361 (+8922)
	ESCAIDE	1 370 (+141)	1 682** (+312)
	EAAD	13 814 (-32)	14 210** (+396)
			*pages switched KPIs
LinkedIn (followers)	ECDC	41 648 (+9 419)	51 029 (+9 381)

Websites

ECDC's website continued to have high traffic in 2022, although not as high as in 2021. After the holidays in December and an increase in COVID-19 in parts of Europe, there was a peak in January, due to the high interest in the maps supporting the Council Recommendation on a coordinated approach to travel measures. The highest number of page views in one day was recorded in January. In 2022, there were 4 515 711 page views, representing a 76% decrease compared to 2021.

Although there were noticeable decreases in visits and sessions, this was not unexpected, given the evolution of the COVID-19 pandemic. However, traffic remains higher than before the start of the pandemic, when ECDC's website had 1 777 587 page views in 2019 and 1 399 610 in 2018. In addition to COVID-19, there was also strong interest in mpox, antimicrobial resistance, and hepatitis cases of unknown origin.

Between 1 February and 31 December 2021, the COVID-19 situation dashboard had 122 861 page views (90% decrease). In 2022, the COVID-19 Vaccine Tracker had 102 077 page views (89% decrease).

Figure 9. Page views on ECDC's website

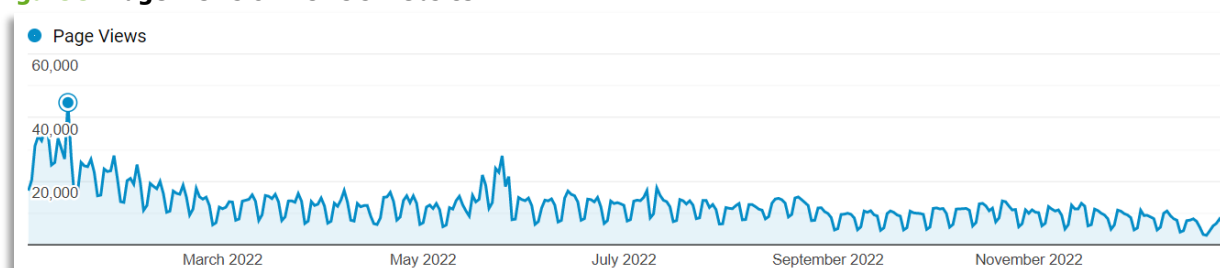


Figure 10. Breakdown of the number of page views for ECDC's website

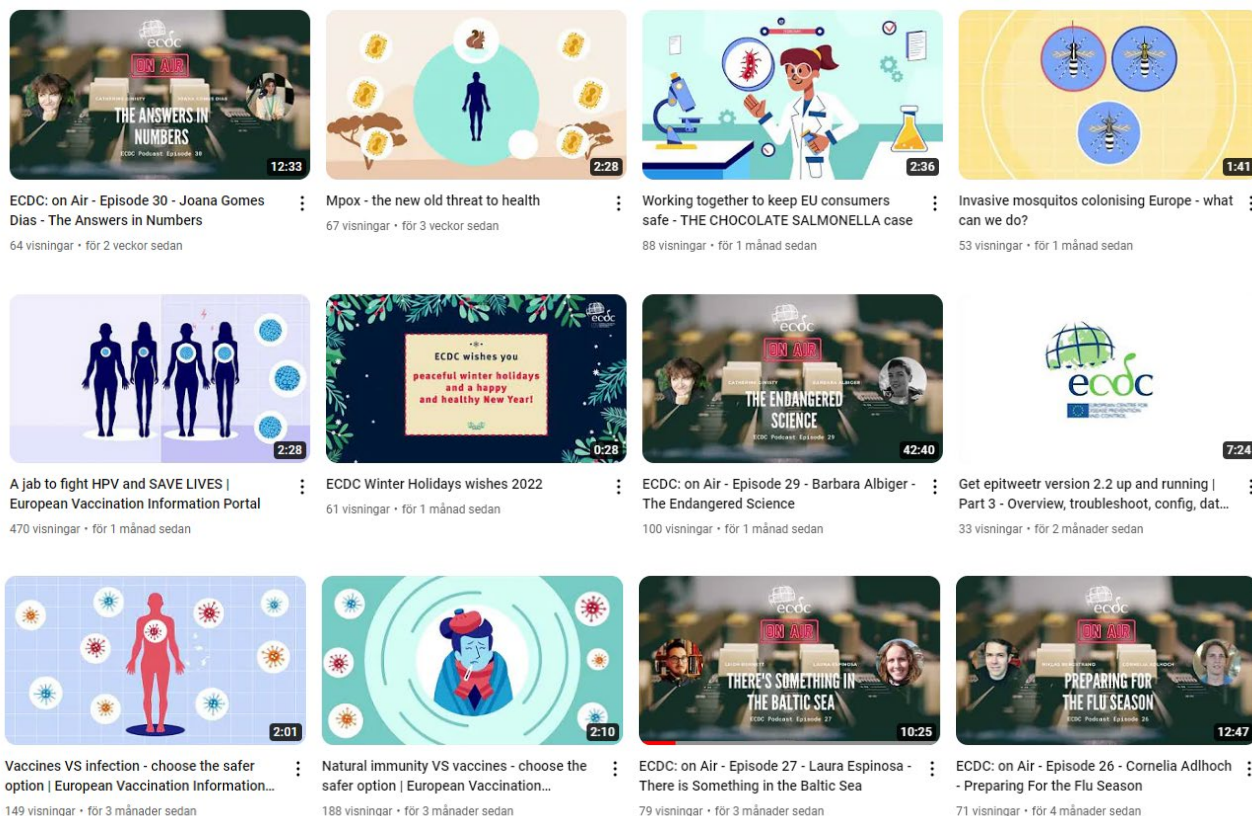
	Page	Views
1.	Daily situation update in the EU/EEA (<i>archived</i>)	307,575
2.	Weekly Council Recommendation maps	301,382
3.	ECDC homepage	296,164
4.	SARS-CoV-2 variants of concern	256,716
5.	COVID-19 country overview	203,455
6.	COVID-19 situation update worldwide	185,552
7.	COVID-19 page	119,228
8.	COVID-19 situation updates	615,362
9.	Data on 14-day notification rate of new COVID-19 cases and deaths	59,218
10.	Data on the daily number of new reported COVID-19 cases and deaths by EU/EEA country (<i>archived</i>)	40,710

Audiovisuals

In 2022, ECDC published 66 infographics, posters and animations on its social media channels (11% decrease), mostly related to COVID-19 but also to antibiotic resistance, vaccination, and mpox. Some of these materials were translated and made available on ECDC's website. Editable versions were also shared with partners and stakeholders across the EU.

ECDC produced 95 publicly available videos (38% increase on 2021) and published most of them on YouTube, where they received almost two million views, compared to 127 000 views in 2021. In total, 117 videos were developed, although some of them were intended for internal use or for events outside of ECDC. The current subscriber count is 3 240, an increase of 370 subscribers on 2021. Most videos have also been shared on ECDC's social media accounts and have become some of its most popular content, as described in the social media section.

In August 2021, ECDC began publishing a podcast 'ECDC: On Air'. So far, 30 episodes have been aired, garnering 172 000 plays. The podcast is available on all major podcasting platforms (Spotify, Apple Podcasts, Google Podcasts and others), as well as YouTube and SoundCloud. The most popular podcasts to date are about the start of the pandemic, the ECDC Fellowship Programme and field epidemiology, and mathematical modelling.

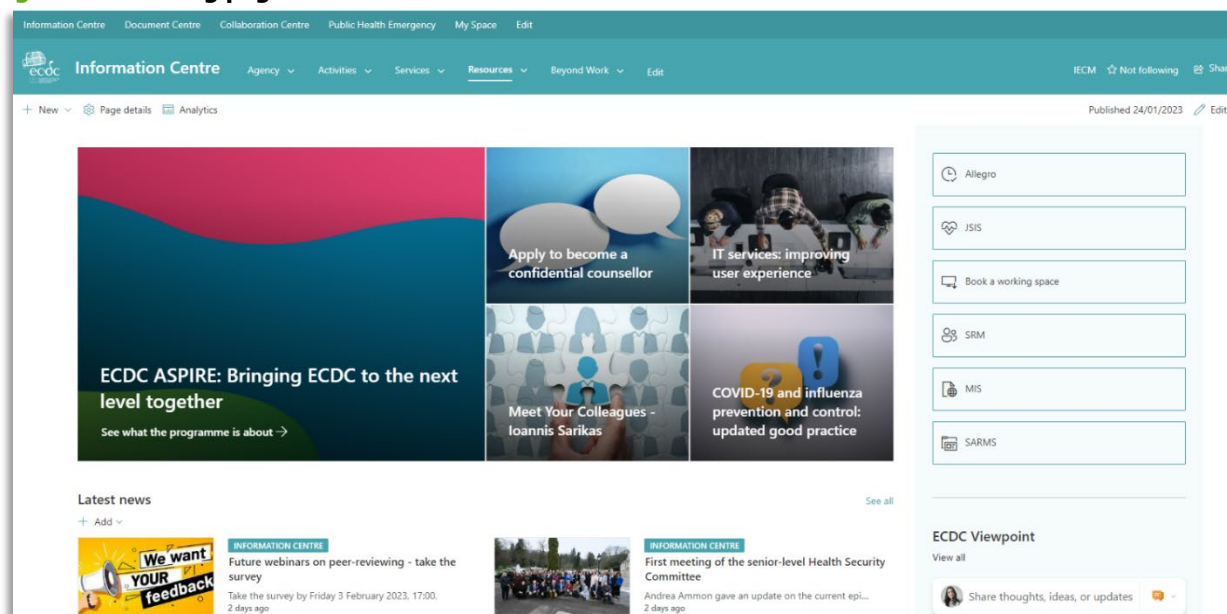
Figure 11. Selection of videos produced in 2022

Internal communication

In June 2022, a new Information Centre was launched to replace the previous intranet as one of the hubs of the new Enterprise Content Management Platform. Its main aim is to provide ECDC staff with reliable, transparent and timely information, and to provide a platform where staff can find the information that they need on an everyday basis, both for their work and for personal matters.

In the second part of 2022, 397 news items (26% increase in six months, compared to the full 2021) were published in the Information Centre. The most popular content was related to staff matters, such as new rules on working time and hybrid working, the calendar for financial, procurement and missions and meetings activities, and work arrangements and plans for the new physical space. A total of 66 news items were about the Director's speaking engagements, partly to ensure transparency but also to invite staff to participate in events that were open to the public.

Special focus continued to be given to ECDC's strengthened mandate, through enhanced use of internal communication channels to share information, including news items following significant developments, features on the internal newsletter 'ECDC On the Spot' and regular updates during the Director's weekly briefings. A total of 25 issues of the internal newsletter were published, and six staff meetings were held.

Figure 12. Landing page of ECDC Information Centre

Other information-sharing mechanisms and outputs

ECDC continued to produce the weekly COVID-19 policy brief, with 35 issues delivered to the European Commission. The objective of this output is to present short and easy-to-read analysis of key indicators, trends and developments concerning the COVID-19 pandemic in the EU/EEA. Along with latest epidemiological trends and updates on measures taken by Member States, the policy brief provides information on the latest outputs by ECDC, with a particular focus on policy implications.

Strategic objective 5. Performance indicators

KPI	Baseline	Target	Means of verification	Frequency of verification	Result 2022
Proportion of key processes reviewed	20%	20%	Process landscape	Annual	28%
Proportion of activities implemented from the annual work programme.	74%	85%	MIS	Annual	89%
Percentage of indicators achieving target.	73%	90%	Consolidated Annual Activity Report	Annual	60%
Percentage of audit recommendations implemented*.	0%	90%	Internal Control Excel file	Annual	67%
Percentage of the Internal Control Framework implemented.	74%	100%	ICF annual review	Annual	80%
Timeliness of recruitment process	10.7 weeks	Maximum 12 weeks	HR data	Annual	9.9 weeks
Number of (short-term and long-term) sick leaves.	- 1.82% (short-term) - 3.28% (long-term)	- <2% (short-term) - <3% (long-term)	Allegro absence data	Annual	1.39% (short-term) - 1.32% (long-term)
Average vacancy rate for Temporary Agent posts (post occupied).	3.3%	<5%	HR data	Annual	4.2%
Number of media clippings and media requests.	- 24 460 clippings - 471 requests	10% increase	Media monitoring report from external contractor, requests received on the press inbox.	Annual	- 57% - 51%
Website statistics: - page views - website sessions - document downloads - returning visitors.	4 515 711 2 267 730 247 347 40%	10 % increase 7% increase 7% increase at least 40%	Google Analytics	Annual	-76% -97% -39% 40% maintained
Stakeholder engagement: number of actions in which communication stakeholders are engaged: - NFP meetings - Meetings ahead of European Antibiotic Awareness Day - Digital and on-site events/visits - Information stands.	1 10 N/A N/A	1 At least 8 At least 3 At least 3	ECDC website, Information Centre, EAAD statistics	Annual	1 NFPs meeting 13 meetings with stakeholders 5 0
Social media statistics: - Twitter followers for the ECDC corporate account - Twitter followers for the outbreaks account - followers on Facebook.	105 764 25 881 273 361	20% increase	Social media	Annual	26% increase across channels
Communication campaigns	8	At least five	ECDC website	Annual	8
Audio-visual content	201 outputs	10% increase	Social media and ECDC website	Annual	30% increase
Internal communication: - news items - newsletters - staff meetings - views for the top five pages of the year.	397 24 6 3 122	At least 250 At least 20 At least 5 At least 1500 views for the top five 2022 pages together	Google Analytics and internal communication inboxes	Annual	397 24 6 3112
Satisfaction of members of the ECDC governance bodies with the cooperation and coordination support offered by ECDC ¹⁴ .	N/A ¹⁵	75%	Stakeholder survey	Biennial	AF - 93% (28 replies) NC - 75% (20 replies)

¹⁴ In order to shorten the questionnaire for Directors of CCBs and the Management Board, this question was not included.

¹⁵ To streamline Dir. CCBs and the Management Board questionnaire, this exact question was not included.

6. Support services

6.1 Digital Transformation Services (DTS)

Digital Transformation plays an important role in enabling ECDC's core work in disease surveillance and response and epidemic intelligence. In addition, ECDC depends on IT systems to support its administrative processes.

In 2022, the ECDC Digital Roadmap 2022–2027 was published, setting clear priorities for ECDC's digital transformation. An assessment of the current ECDC IT Target Operating Model (TOM) was performed, and the necessary changes were adopted in the form of a new Target Operating Model for the period 2023–2027. The new TOM aims to improve quality and time to delivery, with the introduction of hybrid-agile and DevOps software development techniques. In addition, the procurement procedure for the next generation IT Services framework contracts was completed.

The main achievements of 2022 include the takeover of European Federation Gateway Service (EFGS) operations from the European Commission. The ECDC surveillance portal EpiPulse (launched in 2021) was further developed to include Whole Genome Sequencing (WGS) data collection, processing, analysis and visualisation. A new indicator-based European surveillance system for COVID-19 was developed and is being piloted with two Member States. ECDC became part of a consortium that will implement the 'EHDS2 Pilot', with ECDC responsible for assessing the feasibility of using EHDS to monitor antimicrobial resistance.

During 2022, ECDC also upgraded existing platforms, such as the Enterprise Content Management Platform (ECMP), the Stakeholder Relation Management and the ticketing system which are now safely hosted on cloud-based platforms. New projects have also been launched, such as the Planning and Monitoring System.

Developing, operating, and maintaining these systems requires highly secure, interoperable and robust infrastructures. During 2022, ECDC fully replaced its telephony system with a solution that is fully integrated with MS Teams and mobile telephony. It also replaced its Disaster Recovery System and procedures, as well as its storage and backup system. Old and obsolete platforms have been phased out in order to ensure continuous vendor support.

ECDC has also updated its information security policy and created a cybersecurity policy, including plans for specific activities over the next four years. ECDC has expanded its security awareness and training efforts with a new cybersecurity e-learning course and continues to run phishing tests and awareness campaigns for all staff. ECDC has also started to implement an Information Security Management System (ISMS) with associated execution, monitoring, support and auditing processes.

Table 5. List of mission-relevant IT solutions (not exhaustive)

System application	Description
Enterprise Content Management Platform (ECMP)	Launched in Q2 2022, the Enterprise Content Management Platform is a unified Microsoft 365 based platform for communication, collaboration and knowledge sharing, and for storage of ECDC's documents and records. It provides a single, unified search experience (Microsoft Search) supported by metadata-tagging and terminology management.
Document Management System (DMS)	DMS is actively being phased out in 2023 and has been replaced by ECMP (see above). DMS is based on SharePoint 2013 technology.
Early Warning and Response System (EWRS)	A rapid alert system that supports critical communication on serious cross border health threats, in accordance with Decision 1082/2013/EU, through a web-based platform used to exchange information on public health threats, between the European Union/European Economic Area (EU/EEA) Member States, the European Commission, other EU agencies and the World Health Organization.
ECDC data warehouse	ECDC's data warehouse hosts all indicator and event-based surveillance data along with determinants of health data. It covers information relevant for performing standard or specific epidemiological surveillance analysis and reporting, along with harmonised terminology between datasets for all the communicable diseases and related special health topics covered by ECDC. In addition, through its dataset management and storage, ECDC data warehouse supports the ECDC Open Data Framework.

System application	Description
ECDC extranets	Support collaboration of public health networks, working groups and institutional bodies (Management Board and Advisory Forum). Currently ECDC manages circa 30 extranet sites. In 2022, the migration of the extranets to the ECDC Collaboration Hub (part of the ECMP platform) commenced, making new functionalities available and bringing improvements to the user interface. It is anticipated that migration will be completed in 2024 and current extranets will be phased out.
ECDC Library	A hybrid service owned and managed by experienced library staff encompassing both desktop electronic resources and a physical library service. The physical library facilitates access to the print collection as well as to a range of other resources - dedicated workspaces, administrative tools and a collaboration space where colleagues can come together to discuss ideas and present information.
ECDC Virtual Academy (EVA)	Launched in 2014, EVA is the learning management system that supports ECDC public health training activities. It provides access to e-learning, mixed courses and training materials, and facilitates the administration of face-to-face activities, including the ECDC Fellowship programme (EPIET & EUPHEM), MediPIET and continuous professional development activities designed, developed, and implemented with different ECDC teams and experts.
ECDC websites	The ECDC websites (ECDC corporate site, ESCAIDE, EAAD and European Vaccination Information Portal) support the communication of ECDC's activities and scientific publications to external audiences. The websites leverage Drupal 9 (and will soon make the transition to Drupal 10) technology.
ECED	ECDC Candidate Expert Directory is a roster of potential external experts, allowing ECDC - when deemed necessary - to expand the number of experts and areas of knowledge and skills beyond its own expert staff and expertise.
EpiPulse (European Surveillance Portal for Infectious Diseases)	Online portal for European public health authorities and global partners to collect, analyse, share, and discuss infectious disease data for threat detection, monitoring, risk assessment and outbreak response. EpiPulse was launched in 2021 and integrates several surveillance systems that were previously independent (The European Surveillance System (TESSy), the five Epidemic Intelligence Information System (EPIS) platforms and the Threat Tracking Tool (TTT)), providing new functionalities and seamless access to data in a single platform. The portal facilitates collection, analysis and dissemination of indicator- and event-based surveillance data on infectious diseases and associated health issues, including global epidemic intelligence, whole-genome sequencing, and health determinants.
European Federation Gateway Service (EFGS)	Component of the technical interoperability solution agreed by participating Member States in the eHealth Network to enable interoperability of approved mobile apps supporting contact tracing, as set out in the Commission Implementing Decision (EU) 2020/1023 of 15 July 2020 amending Implementing Decision (EU) 2019/1765 as regards the cross-border exchange of data between national contact tracing and warning mobile applications with regard to combatting the COVID-19 pandemic.
Eurosurveillance publication platform and website	The platform allows publication (content management), storage and dispatch of articles and related information to various repositories and databases as well as the web publication of Eurosurveillance, a European journal on communicable diseases ranking among the top-10 journals in its field.

System application	Description
	In addition, the electronic submission system is a separate platform where authors can upload articles that are then processed and monitored by editors based on strict workflows that entail internal and external evaluation (peer-review).
Intranet	The legacy intranet has now been replaced by an Information Centre which is part of the Enterprise Content Management Platform.
Management Information System (MIS)	Internal system used to plan and monitor the implementation of ECDC's annual work programme. This system is to be replaced with a new solution called PRIME (Planning, Resources, Information, Monitoring, and Execution).
Passenger Locator Form Exchange Platform (ePLF)	Enables the secure, timely and effective exchange of data between the EWRS competent authorities of the Member States, by enabling them to transmit information from their national digital PLF systems to other EWRS competent authorities in an interoperable and automatic manner.
PHE Intranet (EOC)	Internal crisis management tool where response activities and resources are gathered, managed and maintained.
Remote access to ECDC systems	Allows the continuity of work by ECDC staff when away from the Centre's premises (e.g., during missions and when on stand-by duty.)
SARMS	ECDC Scientific Advice Repository and Management System supports the production of ECDC outputs with scientific content from registration to clearance and dissemination using electronic workflows and provides a repository of ECDC scientific outputs for reference and auditing purposes.
Stakeholder Relationship Management system	A primary business system of contacts, relationships (internal and external) and interactions with ECDC stakeholders. Supports the centralised management of Member States and other external contacts. The system is a user-friendly one-stop-shop with the potential for evolution to meet growing business needs.
Surveillance Atlas of Infectious Diseases	Launched in 2014, this tool provides highly interactive, graphical access to surveillance data. It is accessible via ECDC's web portal. The Atlas has been evolving, in particular by increasing the number of diseases covered.
The European Surveillance System (TESSy)	Supports collection and validation of data for public health surveillance, provided by EU Member States and other associated countries. TESSy will be gradually integrated into EpiPulse (2021–2023).
Threat Reports Mobile App	Free and open-access mobile application that gives direct access to key updates and reports on communicable disease threats of concern to the EU on mobile devices.

6.2 Resource management

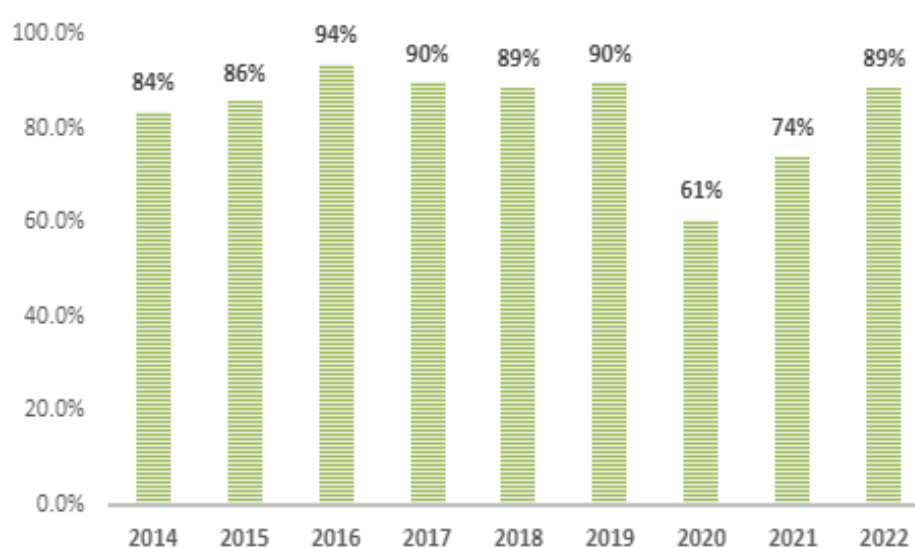
Throughout 2022, the Resource Management Services (RMS) Unit provided significant support for operational requirements, with high-quality delivery in the areas of Corporate Services, Finance and Accounting, Human Resources management, Legal Services, and Procurement. Although the enduring impact of the public health emergency (PHE) affected the core support services, the Unit was able to move its continuous improvement agenda ahead more effectively than in the preceding periods. During the period, ECDC effectively managed to finalise over 220 procurement exercises, held 167 meetings, organised 265 missions, and implemented 99% of its budget; all with the able support of RMS. In addition to the operational support tasks, several projects were undertaken to enhance effectiveness and efficiency in future periods:

- Corporate Services: return to the office activities organised, workplace transformation project launched, EMAS certification project continued, review of business continuity and crisis management plans initiated.
- Finance and Accounting: asset management framework developed for implementation in 2023.
- Legal Services: implementation of independence policy for staff further progressed.
- Procurement: further e-workflows developed and deployed, use of Commission eProcurement tools expanded and additional procedures now published and registered in the tools.

Figure 13. Budget execution



Figure 14. Work programme implementation



Support services. Performance indicators

KPI	Baseline	Target	Means of verification	Frequency of verification	Result 2022
Quality of software products	For IT products with BIP 1 or 2: 0 Critical and 1 High	For IT products with BIP 1 or 2: 0 Critical and 0 High	Azure	Annual	2 / 26 IT Products failed the acceptance criteria (EpiPulse, FluNews)
Availability of hosted applications under SLA	99.9%	99.0%	ECDC Infrastructure Service Management Report	Annual	08:00-18:00 99.95% 24/7: 99.91%
Business owners' satisfaction with the DTS Unit services.	N/A	At least 57%	End users' satisfaction survey	Annual	41%
Proportion of Information and Communication Technology Front-Office requests and incidents resolved, as per SLA.	90% for requests and 95% for the incidents	Above 95%	ECDC Infrastructure Service Management Report	Annual	Requests: 96.10% Incidents: 96.15%
Digital literacy	N/A	70%	Microsoft Adoption Score	Annual	68 %
Percentage of feasibility studies performed according to the plan.	100%	100%	Project server	Annual	Not reported.
Procurement/grant procedures finalised and contracts launched on originally planned date.	65%	75%	MIS	Annual	51.7 % launched on the originally planned date; 36.4 % signed on the originally planned date.
Percentage of changes made in the procurement plan throughout the year.	23%	<20%	MIS	Annual	21 %
Proportion of submitted and reviewed annual and specific declarations of interest: - Management Board - Advisory Forum - Senior management - External experts at meetings - External experts for RRA	- 96% - 89% - 100% - 99% - 100%	100% for each category	Legal Services Section files	Annual	-97% -97% -100% -89% -100%
Proportion of replies to requests for Access to Documents (ATD) processed within the legal deadline.	N/A	100%	Legal Services Section files	Annual	100%
Percentage of confirmatory requests responded to within the legal deadline.	N/A	100%	Legal Services Section files	Annual	N/A - no confirmatory applications were received.
EU Eco-Management and Audit Scheme (EMAS)	EMAS Registration	100%	EMAS Environmental Statement	Annual	90%
Percentage of meetings launched on planned launch date.	92%	80%	MIS	Annual	75%
Percentage of changes made in the meeting plan throughout the year.	17%	20%	MIS	Annual	33%
Budget implementation of the Centre - C1 Commitment rate*	99.35%	100%	ABAC WF	Annual	98.86%
Percentage of invoices paid within the time limits of the ECDC Financial Regulation*	98%	99%	ABAC WF	Annual	98.2%
Rate of cancellation of payment appropriations*.	1.1%	2%	ABAC WF	Annual	9.41%
Rate of budgetary outturn*	1%	5%	Budget outturn account	Annual	17.41% ¹⁶

* Indicators according to the [Guidelines on key performance indicators \(KPI\) for Directors of EU decentralised agencies, 13 March 2015, SWD \(2015\) 62 Final](#).

¹⁶ Due to cancellations of payment appropriations within the HERA Incubator WGS infrastructure support grant agreements, which were beyond ECDC's control, the Agency cancelled more than 5% of its payment appropriations in 2022.

Part 2a. Management

1. Management Board

In 2022, following two years of working virtually, the Management Board once again held all its regular meetings as face-to-face or hybrid meetings. The 55th Management Board meeting in June was hosted by the French Public Health Institute (Santé Publique France), in Paris, France, as an event under the French Presidency of the European Council. At its 56th meeting in November, the Board re-elected Anni Virolainen-Julkunen and Zofija Mazej Kukovič as Chair and Deputy Chair of the Management Board respectively. During an online extraordinary meeting held in April, the Board decided to extend the mandate of the current ECDC Director until 15 June 2024.

During the course of 2022, the Management Board approved the ECDC Policy on Scientific Integrity and Independence and decided on the hosting arrangements for future ESCAIDE meetings. The Board also endorsed the Final IAS Internal Audit Plan 2022–2024.

In accordance with legal obligations, the Management Board approved the Consolidated Annual Activity Report 2021 and endorsed the final annual accounts for 2021. The Board also approved the ECDC Single Programming Document 2023–2025 and the Budget and Establishment Table 2023. In addition, the Board members discussed the draft ECDC Single Programming Document 2024–2026.

No risks or control issues were brought before the Management Board for discussion in 2022.

2. Major developments

The ECDC Management Board had an extraordinary meeting in April 2022 following which it extended the mandate of the ECDC Director until 15 June 2024.

The event having most impact on ECDC's work in 2022 continued to be the COVID-19 pandemic. Although the COVID-19 PHE was gradually de-escalated in 2022 and has been at PHE Level-1- maintenance phase since 9 June 2022, the associated workload remained high throughout the year. This was further stretched as ECDC had two other PHEs operating at the same time: hepatitis of unknown origin in children from April to July 2022 and mpox from May to October 2022.

From February 2022 onwards, Russia's invasion of Ukraine brought new, unplanned work to address the needs of EU/EEA Member States and non-EU countries neighbouring Ukraine. In March 2022, an internal Ukraine Task Force (UTF) was set up to coordinate all ECDC Ukraine-related actions internally, with the European Commission, and with relevant UN organisations. During 2022, a total of 11 meetings were held, most of them with the EU Member States, and two with representatives of the Republic of Moldova. Based on the needs identified, 14 technical documents/guidance have been published (to date) and translated into the relevant languages.

To support national authorities and WHO, assisting Ukrainian refugees following Russia's invasion, ECDC organised several field deployments. A number of infectious disease experts and communication officers were deployed to Poland and Romania. In addition, two infectious disease experts were deployed to Uganda to support the local Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) office and EU delegation during an Ebola virus disease outbreak.

The discussion on ECDC's amended Founding Regulation and the proposed Regulation on Serious Cross-Border Threats to Health continued in the European Parliament and Council until the last quarter of the year. During this process, ECDC provided support to the Commission, as required, and initiated internal work in preparation for implementation of the legal mandate as of 2023.

3. Budgetary and financial management

Fund source C1 (current year appropriations)

Budget execution in terms of commitment appropriations at year-end reached 98.86%, equivalent to EUR 98.7 million.

Budget execution in terms of payment appropriations at year-end reached 73.61%, equivalent to EUR 73.5 million.

Information on transfers and amending budgets

The Director exercised her right to amend the budget within the limitations of Article 26.1 of ECDC's Financial Regulation and approved net budget transfers of EUR 10.2 million between several budget lines within the different titles to optimise the use of the budget.

Level of appropriations carried forward to the following financial year

ECDC carried forward the amount of EUR 25.2 million to 2023 (compared to EUR 59.3 million which was carried forward to 2022).

Implementation of appropriations carried forward from the previous financial year

Budget execution in terms of payment appropriations for the fund source C8 at year-end reached 76.67%, EUR 45 466 636 was paid from EUR 59 303 806 carried forward to 2022. Due to force majeure circumstances, several of the HERA grant beneficiaries applied for grant extensions as a result of significantly delayed delivery times, caused by global supply chain issues (triggered by the war in the Ukraine and COVID-19 issues impacting production in China). Therefore a substantial part of the C8 funds reserved for this purpose could not be implemented. However, with regard to the total budget carried forward into 2022, excluding the implementation of the HERA Incubator grants, the C8 rate of execution for 2022 was 95.8%, which is an improvement of 3.4 points on the previous year.

Interest charged by suppliers for late payments: EUR 0.

Procurement procedures

During 2022, a total of 190 contracts and grant agreements were concluded with ECDC:

- Ten direct contracts with a total value of EUR 543 141.10;
- Twenty-two ECDC framework contracts with a combined budget ceiling of EUR 37 234 600;
- One hundred specific contracts (signed contracts under framework contracts) with a combined budget of EUR 18 983 443.26;
- Ten framework partnership agreements (grant procedures);
- Forty specific grant agreements with a total value of the ECDC contribution amounting to EUR 1 789 412.57.

ECDC also signed five inter-institutional and inter-agency contracts. These are contracts procured by other entities under which ECDC may also call for tender.

Summary information on budgetary operations for the year

The core budget of the Centre for 2022 (EUR 99.8 million) decreased by 40% compared to 2021 (EUR 168.1 million). The Centre paid no interest to suppliers for late payments (>30 days) in 2022.

For additional information see Annex 8, Final annual accounts 2022.

Controls and control results

A short description of the controls and the control results can be found below in relation to the internal control objectives mentioned in ECDC's Financial Regulation, Article 30.2.

A number of control results are reported to the Director every year for ongoing and/or separate assessment to ascertain whether the components of internal control are present and functioning.

The following assessments are prepared, and made available to the Director, at least annually:

- Overall self-assessment of internal control in ECDC, including main deficiencies reported;
- Self-assessment of the implementation of the ECDC Internal Control Framework;
- Results of the specific assessment(s) performed;
- Analysis of exceptions reporting, including action plans on possible remedial actions;
- Status of internal control and quality weaknesses reported;
- Results of the ex-post controls for the grant verifications;
- Summary of the interactions with OLAF, European Ombudsman and Data Protection Officer;
- Analysis of the audit observations/recommendations from the Internal Audit Service and the European Court of Auditors to identify internal control deficiencies, including monitoring ECDC's implementation of the corrective actions being implemented in a timely manner.

Legality and regularity of the underlying transactions

ECDC's budget is implemented through four main types of transactions: salaries and salary related entitlements, reimbursements (to staff or external persons), procurement related expenditure and grants.

The main objective of the controls related to budgetary implementation at ECDC is to ensure compliance with the regulations in place, thereby ensuring the legality and regularity of the underlying transactions.

The main ex-ante controls to be performed are described in the internal procedures (IP). The most important of these are the IP on the Advisory Committee for Procurement, Contracts and Grants (CPCG); the IP on Procurement and Contract Management; the IP on Grant Management, and the IPs on the Financial Workflows for Commitments and Payments (including the checklists for the ex-ante verifications to be performed).

In addition to the ex-ante controls performed, ex-post controls are performed for grants. The ex-post verifications of grant agreements are performed every year by ECDC, in line with the ECDC Grant Verification Policy and the ECDC Grant Verification Plan. The verifications are performed by an external audit firm.

In 2021, two grants were selected for verification and the results of the verifications were concluded in 2022. In 2022, another two grants were selected, and the draft results of the verifications have been received. The final results are expected to be established in the first quarter of 2023.

The sample of verifications performed per year is not representative of the total amount of grant agreements or directly linked to the payments made for 2022. However, the result of the verifications does not indicate that the most likely average error regarding grant agreements in ECDC is above the materiality criteria of 2%.

Prevention, detection, correction and follow-up of fraud and irregularities

ECDC has an anti-fraud strategy in place. The current anti-fraud strategy covers 2021–2023 and was approved by the Management Board in November 2020. It is based on a fraud risk assessment and includes a number of activities, such as internal fraud training activities, performing an annual review and refining the fraud risk assessment over time, and selecting an area annually in which to further analyse and potentially improve the controls in place. The fraud risk assessment was updated in 2022 and the implementation of the action plan is monitored.

ECDC has an OLAF coordinator who is responsible for coordinating issues regarding fraud and irregularities and contacts with OLAF. The OLAF coordinator reports to the Director at least once a year regarding the work performed and the status of fraud-related issues and investigations.

Safeguarding of assets and information

At the end of 2022, the total net value of ECDC's fixed assets was EUR 2.11 million. ECDC's assets are managed in the ABAC Assets IT tool. A physical inventory is performed at least every two years. The most recent physical inventory for both IT equipment and furniture was performed in 2022. Overall, it is concluded that the most likely error for assets is below the materiality threshold, however, ECDC is implementing some improvements to the procedures in place.

Information at ECDC is safeguarded through the ECDC Information Security Management System (ISMS). ISMS covers the daily activities of the IT Security team, running security processes (for governance, risks, compliance and technical security) and managing security technology/tools for IT security and cybersecurity protection. Critical information and IT assets are identified through a business impact assessment process and registered with associated ownership in the Information Asset Catalogue, Security Asset Register and Data Protection Notification tool. Information security is managed by the IT Security Officer and IT infrastructure security is managed by the IT Security Operations Specialist. Cybersecurity is managed by the Cybersecurity Architect and responsibility is with the Digital Transformation Services Unit. The extended IT Security Team includes ECDC management and representatives from IT Operations, Legal, HR, Information Management and other security stakeholders. During 2022, ECDC continued to be a subject of interest for cyber-criminals and 'hacktivists' which materialised in the form of different cyber-attacks on ECDC infrastructure and IT services. Continuous improvements to ISMS are being made to protect and safeguard the confidentiality, integrity and availability of critical information throughout its lifecycle and to protect network and IT systems and users of the systems.

Reliability of reporting

ECDC carries out financial reporting both internally and externally at regular intervals. Reports on budget implementation are provided monthly to the Director and Heads of Unit. External financial reporting is provided mainly through the annual accounts of the Centre and the annual report on budgetary and financial management, in accordance with the ECDC Financial Regulation. The budget implementation reports are provided to the Audit Committee and Management Board in conjunction with the meetings held three times per year. These external reports are audited by the European Court of Auditors and no material anomalies were noted for 2022.

Effectiveness, efficiency, and economy of operations

The effectiveness, efficiency and economy of operations is covered mainly by Part 1 of the Consolidated Annual Activity Report, but sound financial management is also an integral part of the ex-ante controls performed for the individual transactions authorised.

Costs and benefits of controls

The controls are designed to optimise effectiveness and efficiency, by striking the right balance between the benefits of the controls, in terms of the legality and regularity of the underlying transactions, and their effectiveness and efficiency, taking into consideration the risks involved.

With regard to the effectiveness of the controls, the European Court of Auditors has given ECDC an unqualified opinion on the 2021 accounts and had no comments at all regarding the legality and regularity of the underlying transactions. No other indications were found to indicate that the controls in place were not effective.

In terms of the efficiency and economy of the controls, no serious anomalies were reported, however, in order to better measure their efficiency and economy, ECDC has introduced some more detailed indicators to be used in 2023.

The estimated costs of control for ECDC in 2022 are included in the Table 6 below.

Table 6. Estimated costs of control 2022

Relevant Control System	Ex-Ante Controls			Ex-Post Controls			TOTAL		
Title	Estimated Costs of Control (€)	Funds Managed (€)	Ratio (%)	Estimated Costs of Control (€)	Amount Verified and/or Audited (€)	Ratio (%)	Estimated Costs of Control (€)	Funds Managed (€)	Ratio (%)
Salaries and other entitlements	323,869	36,508,439	0.89%	-	-	0.00%	323,869	36,508,439	0.89%
Reimbursements	141,787	187,829	75.49%	-	-	0.00%	141,787	187,829	75.49%
Procurements	3,491,282	61,465,074	5.68%	-	-	0.00%	3,491,282	61,465,074	5.68%
Grants	925,193	20,821,697	4.44%	19,485	244,626	7.97%	944,678	20,821,697	4.54%
TOTAL	4,882,131	118,983,039	4.10%	19,485	244,626	7.97%	4,901,615	118,983,039	4.12%

The table is split according to the relevant control systems, based on how ECDC implements its budget, and by ex-ante and ex-post controls.

The table and calculation method has been inspired by the approach used in the European Commission. The estimated costs of control include the estimated salary costs (including social charges) of the staff directly involved in the relevant control systems.

The staff included as staff directly involved in the control systems are those working in the Resource Management Services Unit with accounting and financial management issues in the Finance and Accounting Section; the staff working on the management of salaries in the Human Resources Section; those working with the control of reimbursements in the Missions and Meetings Group of the Corporate Services Section and the Human Resources Section; the staff working with procurements and grants in the Legal Services Section and in the Procurement Section and the operational staff working directly with grants in the Fellowship Programme Group of the Public Health Training Section and the Microbiology and Molecular Surveillance Group of the Surveillance Section in the Public Health Functions Unit. In addition, an estimation has been made for the amount of time spent by the operational staff involved in the procurement-related expenditure.

The estimated costs of control do not include any direct or indirect information technology costs, staff costs for general control-related activities (e.g. planning, quality management, internal control coordination, anti-fraud related work) or any other overhead costs (e.g. costs for office space).

The costs of control are compared to the funds managed (defined as funds paid as C1 and/or C8 credits in 2022), which makes it possible to establish a ratio.

The ex-post costs of control include the staff costs for the coordination and monitoring of the grant verifications and the costs of the external audit firm performing the actual verifications.

ECDC will further refine the methodology used, and closely follow the development of the cost of controls and the ratios in the coming years. The cost of controls and the ratios are difficult to compare with other organisations. However, they are indicators to be used over time to monitor the efficiency of the controls in place.

As seen in the table, the ratio for the costs of ex-ante control for salaries and other entitlements is relatively low, mainly due to the rather large amount of total salary payments. The ratio is similar to last year. The ratio for the costs of ex-ante control is much higher in relation to reimbursements than for other types of transactions. Reimbursements are clearly more time-consuming than other types of transactions, due to the large number of

small individual payments made. The ratio for the costs of ex-ante control for procurements is closely linked to the number and types of procurements performed during the year in question. This year, the costs of control have increased in comparison with those for 2021, however, the total value of procurements has gone up even more, leading to a lower ratio (5.68% in 2021, compared to 6.81% in 2021). Finally, the costs of control for grants have increased slightly compared to 2021. The ratio increased from 1.83% in 2021 to 4.54% in 2022. This is mainly due to the large reduction in the amounts paid (from EUR 48.1 million to EUR 20.8 million) for the European Health Emergency preparedness and Response Authority (HERA) incubator programme grants in 2022 compared to 2021.

4. Delegation and sub-delegation of the powers of budget implementation to agency's staff

The Director of ECDC, as authorising officer (AO), has delegated financial responsibility to the five Heads of Unit, as authorising officers by delegation (AOD).

The Heads of Unit in turn delegate responsibility – but only in their absence – to the Deputy Heads of Unit (Authorising Officers by Sub-Delegation (AOSD)). Should the Deputy Head of Unit be unavailable, the authority returns to the Director. This ensures that a very limited number of people may act as authorising officers at ECDC.

The authorising officers by delegation can enter into budgetary and legal commitments and authorise payments. All budgetary and legal commitments above EUR 500 000 require the signature of the Director, while the delegations for the authorisation of payments are unlimited.

For the expenditure in 2022, the AODs signed a Declaration of Assurance to the AO for their area of delegated responsibility. No reservations were raised by the AODs.

5. Human resources management

Human Resources management supports the Centre's management and staff by providing continuous HR services in areas such as recruitment, working conditions, pay and entitlements, learning and development, and staff health and well-being. The objective of the Centre's learning and development activities is to offer professional growth for the individual and maintain and further strengthen the Centre's organisational performance.

As part of the review of ECDC's mandate, at the beginning of 2021 the Centre received an additional 73 posts (both Temporary Agents and Contract Agents) for the years 2021–2024. Most of the posts initially allocated for 2022 were approved during the course of 2021 and the recruitment started in the middle of that year. A total of nine posts were allocated for 2022. However, given the late approval of the posts in 2021, there was a considerable carry forward of recruitments into 2022. Furthermore, 25% of the posts were filled with successful internal candidates, which further increased the number of recruitments that had to be carried out. In addition, during this growth phase and in combination with the workload due to the pandemic and new public health events during 2022, HR continued to reinforce the organisation with short term staffing (interims) for the first part of the year.

A first draft of the 'People Strategy' was developed. The strategy will guide the modernisation and consolidation of ECDC's HR management services in the years to come. Individual strategy projects are now underway, for example activities and actions linked to health and well-being in the workplace, while others were finalised in 2022, such as the e-recruitment tool and the online induction programme. The new onboarding programme provides a portfolio of essential training courses in all areas of the Centre's activities for new staff and also serves as a refresher training course for existing staff.

With the staff return to the office in 2022, albeit in a hybrid working mode, support was provided for the purposes of 're-connecting', by organising 'retreats' for different teams throughout the organisation.

Furthermore, with the implementation of the newly adopted Policy on Learning for Continuous Professional Development and the creation of a library of competencies, which provides a tool for staff and managers when searching for specific skills (a key outcome of the ECDC Future Competencies project), positive steps were taken to enhance learning and development at the Agency. The administrative, governance and IT libraries of competencies were also finalised during 2022, and the library for operational competencies is expected to be ready by mid-2023.

The Centre further enhanced its support to staff learning and development by increasing the allowance for individual training and facilitating staff access to e-learning platforms (EU Learn, LinkedIn Learning and the ECDC Virtual Academy).

The Centre also adopted new implementing rules regarding time management and hybrid working, as well as implementing rules for administrative inquiries.

The majority of the jobs at the Agency (78.5%) are related to the implementation of activities linked to its operational work. A total of 14.9% of the jobs come under the category 'administrative support and coordination', while 6.6% of the jobs are defined as neutral (i.e. primarily in the area of finance/accounting and internal control) (see Annex 4, Establishment plan and additional information on human resources management).

6. Strategy for efficiency gains

In 2022, ECDC continued its efforts towards delivering efficiency gains. The Integrated Management Framework (IMF) Working Group continued to support preparations for the implementation roadmap for the IMF. The roadmap was discussed and completed in 2022.

The introduction of new methodologies, including the automation of support and operational processes critical for achieving and sustaining further efficiency gains, continued in 2022. During the year, four new administrative processes were automated through electronic workflows. A new cost-effective solution for the electronic workflows platform was also implemented to replace K2. An overall analysis of the use of the electronic workflows already shows that a significant number of users have adopted them and that they have markedly reduced processing time, due to the elimination of unnecessary steps, while ensuring legal compliance.

ECDC is also engaged in a number of joint procurements with other EU agencies and is using shared IT services, such as the disaster recovery centre of European Union Intellectual Property Office (EUIPO).

As already mentioned, ECDC is also implementing a number of operational programmes and actions, such as the re-engineering of its surveillance systems and the implementation of an automated tool for early detection of public health threats for increased efficiency.

7. Assessment of audit and ex-post evaluation results during the reporting year

7.1 Internal Audit Service (IAS)

ECDC is audited by its internal auditor, the Internal Audit Service of the European Commission (IAS). The audit work is defined in the risk-based IAS strategic internal audit plan. A new plan was developed by the IAS in 2021, which covers the period 2022–2024.

All observations and recommendations are taken into account and appropriate action plans are developed. The implementation of these actions is regularly followed-up and presented to the Audit Committee of the Management Board.

In 2022, no new audit recommendations were received from the IAS. The planned audit on information security management in ECDC was postponed by the IAS to 2023. However, one limited review was initiated on the adequacy of the cooperation and coordination mechanisms to prevent, detect and respond to cross-border health emergencies at HERA, DG SANTE, EMA and ECDC. It is planned to be finalised in 2023.

7.2 Internal Audit Capability (IAC)

Not applicable.

7.3 European Court of Auditors (ECA)

ECDC's annual accounts are audited by the European Court of Auditors (ECA). The audit includes a statement of assurance as to the reliability of the Centre's accounts and the legality and regularity of the underlying transactions.

ECDC received an unqualified opinion for 2021, indicating that the accounts are reliable and the transactions underlying the accounts are legal and regular. The ECA made no other comments in its final report for 2021.

The ECA audit of the 2022 annual accounts is ongoing. The first part of the audit was performed in November 2022. The audit will be finalised during spring 2023, and a draft report will be available by June 2023.

In 2022, the ECA published a Special Report (No. 13/2022) on free movement in the EU during the COVID-19 pandemic. The report included one recommendation for ECDC: 'Recommendation 4 – Improve the monitoring of ECDC guidance implementation. The ECDC should obtain regular feedback from its stakeholders to assess the usefulness and impact of its guidance. Target implementation date: end of 2022'. ECDC provided the following reply: 'ECDC assesses the usefulness and impact of its guidance in a number of ways, mainly through the ECDC Stakeholder Survey and regular feedback from the Advisory Forum. A number of questions on the usefulness and impact on its guidance will be included in the ECDC Stakeholder Survey to be launched in 2022, and regularly in future ECDC Stakeholder Surveys.'

8. Follow-up of recommendations and observations

8.1 Follow-up of recommendations and action plans for audits and evaluations

Audits

A total of five of the eight IAS recommendations open at the end of 2021 were implemented by ECDC in 2022 and reported to the IAS for review. In all, three recommendations were delayed, with the new target dates being extended for one (rated as important) to be implemented by Q1 2023, and two (rated as very important) to be implemented by Q4 2023. Unfortunately, all three recommendations have thereby been delayed for more than one year. ECDC will be following-up these recommendations carefully to ensure that they are fully implemented as soon as possible, but at least by the new target dates for completion.

The recommendation received from the ECA, as part of the Special Report (No. 13/2022) on free movement in the EU during the COVID-19 pandemic, has been implemented and therefore there are no open ECA audit recommendations.

Evaluations

The Centre has continued commissioning evaluations to improve specific interventions. In particular, in 2021 its flagship conference ESCAIDE was evaluated and in 2022, the work with other Centres for Disease Control based on MOUs will be evaluated. Both evaluations, which the Centre externalised, were performed based on a combination of methods: desk research, a comprehensive stakeholder consultation, and a benchmarking and learning exchange with other similar organisations (only applicable for ESCAIDE). The aim was to obtain a solid evidence base to propose practical recommendations and improve stakeholder engagement.

The improvement action plan resulting from the evaluation of ESCAIDE addresses 34 prioritised recommendations of the 53 proposed in the external evaluation report. These actions should be gradually implemented in the next two years and will focus on:

- reviewing ESCAIDE's target audience, intervention logic model and related KPIs to ensure they stay fit for purpose;
- rebalancing the composition of its Scientific Committee to include experts from a broader range of relevant scientific fields, and consequently expanding the opportunities for abstract submission and increasing the abstract reviewers by adding a range of broader profiles;
- maintaining already implemented improvements, such as introducing sessions similar to Bar Camp to create climate for debate and increasing socialising, creating mechanisms to collect suggestions and co-shape the event programme, maintaining takeaway sessions during and at the end of the conference, etc.;
- increasing the visibility and outreach of the conference to make better use of ECDC networks, tailored marketing materials and partnership with other institutions, professional societies and scientific journals, etc.;
- sufficiently engaging different stakeholders in the development of the conference programme and side events (e.g. public call for proposals, volunteers' initiative, national representative and co-creation with the future host country);
- updating governance and ways of working and increasing human resources allocated to the conference organisation, programme development and communication, using a project-centred approach with clear roles, responsibilities and ownership across the Centre.

8.2 Follow up of recommendations issued following investigations by the European Anti-Fraud Office (OLAF)¹⁷

As ECDC did not have any open OLAF recommendations from previous years or receive any new ones in 2022, no follow-up of actions was required. There were no reports impacting the accounts in 2022.

9. Follow-up of observations from the discharge authority

Article 110 (2) of the ECDC Financial Regulation states: 'At the request of the European Parliament or the Council, the director shall report on the measures taken in the light of those observations and comments'. This report provides an overview of the measures taken by ECDC in the light of observations and comments made by the Discharge Authority on 4 May 2022 in respect of the implementation of the Centre's budget for the financial year 2020.

¹⁷ Article 11 Regulation (EU/Euratom) 883/2013 of the European Parliament and of the Council concerning investigations conducted by the European Anti-Fraud Office (OLAF)

Table 7. European Parliament's observations and measures taken by ECDC

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
Performance			
P9_TA (2022)0167 paragraph 10	Notes that the Centre delivered 56% of the outputs initially planned in its Single Programming Document 2020–2022, and 90% of the outputs in the COVID-19 work programme approved in May 2020; notes that 35% of the outputs initially planned were postponed to 2021 or cancelled; notes that an external strategic and performance review of the Centre's COVID-19 response shows that the Centre has to improve its functioning in order to be able to provide a more effective and efficient response in a future public health crisis, while maintaining its core functions and essential outputs; calls on the Centre to report on the measures taken in this regard.	A full-fledged, reviewed Public Health Emergency (PHE) plan was developed in 2021, incorporating lessons learned from the current pandemic and good practices in crisis management identified in exchanges with ECDC partners working in public health. The reviewed PHE plan introduces a specific set-up and critical functions for protracted emergencies. It redefines the PHE levels and reinforces the seniority of the staff assigned. It encompasses faster deployment of resources which is ensured through the identification of the Centre's core activities. The implementation of the new PHE plan began gradually during the ongoing COVID-19 pandemic, and will be the basis for any future public health crisis response.	PHE plan under gradual implementation
P9_TA(2022)0167 paragraph 11	Notes with concern the conclusion of the Court's Review No 01/2021, on the EU's initial contribution to the public health response to COVID-19 (the 'Court's review'), that it was challenging for the Centre to manage the timeliness, quality and completeness of information received from Member States; draws particular attention, however, to the Court's observation that the different surveillance and testing strategies used by the Member States make comparisons and assessments difficult, and that, more generally, the Union's public health competences are limited, which means that the Centre is, to a considerable degree, dependent on Member States for its effectiveness; notes that it took for instance almost a year after the COVID-19 outbreak in Europe before Member States used a common colour code system, and showed commitment to submitting their data to the Centre; notes that the Centre responded to the Court's review by cautioning that considerable work still needs to be done to establish robust population-based surveillance of COVID-19, and remarks that since then the Centre has taken steps to address this matter.	One of the changes ECDC will carry out for the implementation of its strengthened mandate is to examine the way in which it cooperates with stakeholders and partners, including the Member States. This approach will put the partners/Member States at the centre, involve them earlier in the work of the ECDC (e.g. co-development of approaches), finalise the targeted country support approach for those countries most in need, implement the European Union Health Task Force, as mandated in the amended Founding Regulation, and identify a way to assess the impact of ECDC's activities on resources in the countries.	Ongoing
P9_TA(2022)0167 paragraph 13	Welcomes the fact that, separately from the Court's review, the Centre initiated its own strategic analysis,	ECDC management finalised 17 of 26 recommendations from the external strategic and performance analysis and	Implemented

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
	through an external contractor, on the Centre's response to COVID-19 from January to September 2020; notes that that strategic analysis shows that the Centre provides high-quality surveillance data that are widely relied upon, and that its guidance is a critical input for decision makers, but that simultaneously, there is clear potential for the Centre to be more effective; notes the recommendations of the strategic analysis, stating that the Centre should place larger emphasis on the practicality of recommendations and on forward guidance, and should more systematically support learning and exchange of experience between Member States; notes the recommendations of the strategic analysis for a senior strategic lead function to be created, better differentiation of internal processes for the production of technical outputs, and the enhancement of the Centre's capabilities; calls on the Centre to report on the measures taken in this regard and inform the discharge authority of the progress made.	these were implemented by the end of 2021, apart from the full implementation of the redrafted PHE plan (see above). The recommendations focus on improvements in the internal processes and procedures in use during the PHE-mode of working and should already improve the effectiveness and efficiency of the ECDC response during the COVID-19 pandemic. As regards external communication related to crisis, a PHE output toolkit and templates have been in use since April 2021 to ensure informative and short summaries, clear key messages, improved background, and scope of outputs. An internal assessment confirmed that the toolkit is effectively communicated and used and, as recommended, that further training is provided for all ECDC staff. The guidelines on assessment of requests and management of human resources was approved in April 2021. These incorporate comprehensive guidance on the use of the multiple prioritisation criteria (e.g. importance of the requestor, urgency and impact of the task, resource implication). For the strategic analysis, a permanent team for continuous collection of information, assessment and forecasting of changes and developments was established and it operates under the supervision of the ECDC Chief Scientist.	
P9_TA(2022)0167 paragraph 15	Notes that the Centre is developing an entirely new European surveillance system with the aim of progressively covering COVID-19 and all other diseases and health conditions under the Union's surveillance, thus reducing the reporting burden for Member States; further notes that several technology assessment projects are ongoing to ensure that the Centre takes advantage of technical innovations in the most cost-effective manner; calls on the Centre to report on the developments in this regard.	ECDC is currently piloting digital surveillance of severe respiratory infections using data from electronic health records in seven EU Member States. In 2022, this will be extended to six additional countries. Furthermore, in 2021, ECDC finalised the automatic monitoring of social media with the development and publication of EpiTweeter for the rapid detection and assessment of threats. This tool was further enhanced in scope and automation during 2022. The new ECDC surveillance portal called EpiPulse, launched in 2021, was further developed in 2022 to also include Whole Genome Sequencing (WGS) data collection, processing and analysis. In EpiPulse, a new indicator-based European surveillance system is being developed and piloted for COVID-19 in 2022. In 2022-2023, COVID-19 surveillance will be integrated with	Ongoing Implemented Implemented Ongoing

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
		influenza and other respiratory virus infections. In 2023-2024, EpiPulse will progressively expand to cover other diseases and health conditions under EU/EEA surveillance. The new system adopts new technologies and ensures automation of data validation and analysis, thus reducing the reporting burden for Member States. The Centre continues to manage a number of technology assessment projects to ensure that it takes advantage of technical innovations in the most cost-effective manner. The Integrated Digital Surveillance Systems (IDSS) study was finished in 2022. The study resulted in: - a framework to assess the Member States' readiness for implementing IDSS; - analysis of use-cases and an assessment toolkit for use-cases; - analysis of relevant interoperability standards. During 2020–2022, through automation of web-searching, the Centre was able to retrieve and disseminate COVID-19 epidemiological data worldwide. Furthermore, in 2022 ECDC became part of a consortium that will pilot the implementation of a node in the European Health Data Space (EHDS) entitled 'EHDS2 Pilot'. For this purpose, ECDC prepared a pilot study to assess the feasibility of using the EHDS to monitor antimicrobial resistance.	Ongoing Implemented Implemented Ongoing
P9_TA(2022)0167 paragraph 16	Notes that the institutional context in which the Centre operates is changing as a consequence of the lessons learned during the COVID-19 pandemic; calls upon the Court to expand, in its audit for the next financial year, on how the Centre is operating within this adjusted institutional context, and whether, within the adjusted institutional setting, the Centre has enough resources to implement its mandate effectively.		
P9_TA(2022)0167 paragraph 17	Notes that the Centre's action plan to implement the recommendation of the third external evaluation was developed and approved by the Centre's management board; calls on the Centre to provide information regularly to the Discharge Authority on the implementation of that plan.	Follow-up on the implementation of ECDC's action plan resulting from the third external evaluation was presented to the Management Board in March 2022. Most of the actions have already been implemented (e.g. ECDC communication policy approved by the Management Board in November 2021), and several are in the pipeline for 2022/2023 (e.g. new planning and monitoring tool, review of the bilateral	Ongoing

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
		agreement between ECDC and WHO Regional Office for Europe). Many recommendations are related to the implementation of the changes in the ECDC mandate, and ECDC intends to present a roadmap for the implementation of the strengthened mandate to the Management Board in November 2022.	
P9_TA(2022)0167 paragraph 19	Stresses that the Centre should continue promoting cooperation with other EU agencies and international organisations, and fostering dialogue with stakeholders and citizens; welcomes the way in which the Centre worked together with other EU agencies in 2020, particularly in close cooperation with the European Medicines Agency to develop the joint EU-level monitoring system for COVID-19 vaccine effectiveness and adverse effects, as well as in providing public health information for the technical guidance on COVID-19 infection control for air travel, trains and cruise ships.	ECDC collaborates closely with several other EU agencies. For example, together with the European Medicines Agency (EMA), ECDC is currently establishing a new vaccine monitoring platform, an EU-wide mechanism for the conduct of sustainable post-authorisation vaccine monitoring studies independent of commercial interests. The vaccine monitoring platform is intended as a collaborative space between the two EU agencies, to address key research questions on the safety and effectiveness of priority vaccines through EU-funded studies, and to facilitate the exchange of independent scientific evidence, information and experience on vaccine effectiveness and safety monitoring in the EU in the post-authorisation phase. ECDC also collaborates closely with the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) – e.g. on guidance to prevent communicable diseases among people who inject drugs. ECDC works closely with the EMA and the European Food Safety Authority (EFSA) on the Joint Inter-agency Antimicrobial Consumption and Resistance Analysis (JIACRA) reports, as well as with EFSA, EMA, the European Chemicals Agency (ECHA) and the European Environment Agency (EEA) on a scientific report on the impact of the use of azole fungicides, other than as human medicines, on the development of azole-resistant <i>Aspergillus</i> spp. ECDC also collaborates with EFSA on joint surveillance reports (EU 'One-Health' Zoonoses Report, EU summary reports on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals, and food), joint rapid outbreak assessments related to food-borne pathogens, joint avian influenza quarterly reports and zoonotic SARS-CoV-2 risk assessments.	Ongoing

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
Staff Policy			
P9_TA(2022)0167 paragraph 22	Notes that the Centre has adopted a policy on protecting the dignity of the person and preventing harassment; observes that two cases of alleged harassment have been reported and one case was brought to the Court of Justice of the European Union in 2020; calls on the Centre to ensure that continuous measures aimed at strengthening the ethical framework at the workplace and preventing burnout and harassment are taken; calls on the Centre to report to the discharge authority on the developments in this regard.	ECDC has continued its work in the area of ethics, with focus on better visibility and accessibility as regards information, as well as training and awareness raising. In autumn 2021, the Centre ran a survey entitled 'Respectful working environment' and followed up with an action plan in Q1 2022, which is being implemented. As part of this action plan, the Centre has developed an online learning module 'Respectful working environment' for new and already existing staff in its newly launched online 'Welcome to ECDC' programme. This online programme also contains a module on the overall ethical framework. A dedicated page on ECDC's intranet related to the ethical framework will also go live early autumn.	Ongoing
P9_TA(2022)0167 paragraph 24	Is concerned about the large size of the Centre's Management Board, which makes decision-making difficult and generates considerable administrative costs.	The composition of ECDC's Management Board is defined in the ECDC Founding Regulation, and members represent EU Member States, the European Commission, and the European Parliament. The composition of the Management Board was not changed when the Commission proposed the strengthened mandate of ECDC in November 2020 by amending the Founding Regulation.	N/A
P9_TA(2022)0167 paragraph 26	Welcomes the proposal to extend the Centre's mandate, but expresses concern that the addition of new tasks and its increasing workload has not been accompanied by sufficient corresponding increases in the Centre's staff and resources, and that such a shortage of staff puts the continuity of its operations under significant pressure and threatens the quality of the Centre's work.	Now that the amended Founding Regulation has been adopted, ECDC will carry out a thorough review of the requested outputs and services and will, as far as possible, estimate the resource requirements (FTE and budget) for implementing the amended Regulation. This action, envisioned for early 2023, will further support the development of the comprehensive Roadmap covering the implementation of the revised ECDC Strategy 2022-2027, including the amended Regulation.	Ongoing
Prevention and management of conflicts of interest, and transparency			
P9_TA(2022)0167 paragraph 29	Welcomes the improvement in the percentage of Management Board members, Advisory Forum members and their alternates that submitted the required annual declarations of interest in 2020 compared to the figures for 2019; calls on the Centre to ensure that appropriate experts are engaged in the Centre's work and that a high level of compliance with conflict of interest rules is maintained.	In comparison with previous years, the submission rates continue to improve. In 2021, ECDC increased the submission rates to 98% for the Management Board and 95% for the Advisory Forum. Since the beginning of 2020, Members/Alternates of the Management Board and Advisory Forum have not been able to access the meeting documents in the extranet before they submit their annual Declaration of Interest (DoI). In the event of non-compliance, the next level of escalation would be to bar Members/Alternates from attending the meetings, although this has never had to be applied.	Ongoing

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
P9_TA(2022)0167 paragraph 30	Notes that the Centre has developed and is in the process of implementing its internal procedure on conflicts of interest for staff; notes that, according to the Centre's replies, this practice will provide an opportunity to further develop processes and to facilitate additional scrutiny; calls on the Centre to report on the developments in this regard.	ECDC has developed and is in the process of implementing its Internal Procedure on Conflict of Interest for staff. The planning phase will be followed by a training phase and the first step of implementation is planned for the end of 2022. The Compliance Officer and Human Resources Section collaborate on implementing this procedure.	Ongoing
P9_TA(2022)0167 paragraph 31	Notes that the Internal Audit Service (IAS) performed an audit on human resource management and ethics in the Centre in 2020, in accordance with the Strategic Internal Audit Plan; notes that the audit resulted in four recommendations, two of which were classified as very important and two as important; notes that the Centre developed an action plan to take into account these recommendations, which included training and awareness-raising in the area of ethics; calls on the Centre to report to the Discharge Authority on the implementation of the actions planned.	One of the four recommendations has been implemented and sent to the IAS for review. The other three are planned to be implemented by the end of 2022. For the action on ethics – please see response to paragraph 22.	Ongoing
P9_TA(2022)0167 paragraph 33	Takes note of the European Ombudsman's decision of 5 February 2021 in strategic inquiry OI/3/2020/TE on 'how the ECDC gathered and communicated information during the COVID-19 crisis' and welcomes the conclusion that no maladministration was found; notes, however, that despite the acknowledgement of the Ombudsman of the efforts made by the Centre during the COVID-19 crisis to conduct its scientific assessment in a transparent manner, the Ombudsman considers that the mandate of the Centre prevents an independent collection of data, which significantly limits its tasks and, furthermore, that there is room for the Centre to improve how it communicates information to the public, offering their translations in the largest number of official languages possible; asks the Centre to report to the Discharge Authority on measures taken for such an improvement.	A number of ECDC's publications for the general public are provided in all official EU languages, plus Icelandic and Norwegian. Due to the high cost of translations, content targeted at the expert community is provided primarily in English. This is described more at length in ECDC's language policy , and in the Communication Policy 2022–2027, approved by ECDC's Management Board at the end of 2021. Since 2020, ECDC has translated some reports and communication materials related to COVID-19 including: - Facilitating COVID-19 vaccination acceptance and uptake in the EU/EEA - Considerations relating to social distancing measures in response to COVID-19 - Video: How do COVID-19 mRNA vaccines work? - Video: Why were COVID-19 mRNA vaccines developed so fast? Other COVID-19 content that has been translated is available here: https://www.ecdc.europa.eu/en/covid-19/latest-outputs/translated-guidance .	Implemented

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
Internal control			
P9_TA(2022)0167 paragraph 34	Notes that the Centre has implemented all the recommendations from the IAS on 'Preparedness and Response at ECDC' and submitted them to the IAS for review; notes that the IAS reviewed the implementation of those recommendations and the Centre is currently awaiting the final conclusions; calls on the Centre to inform the discharge authority of the results.	The review by the IAS resulted in the closure of all recommendations.	Implemented
P9_TA(2022)0167 paragraph 35	Notes that the Centre's self-assessment regarding the implementation of the internal control framework showed that the internal control system is present and functioning, but some improvements are needed; notes that the Centre's management needs to better define and document the materiality criteria of risk tolerance for the Centre's activities; notes that a new section will be introduced in the Centre's internal control framework to explicitly consider the control activities to be performed and their follow-up, in order to ensure that objectives are achieved; notes that an internal communications policy is to be developed, including communication on the objectives and responsibilities of internal control; calls on the Centre to report to the Discharge Authority on the developments.	The improvements mentioned are part of the workplan for 2022 and are planned to be implemented by the end of the year. ECDC will report on the status of the implementation in the Consolidated Annual Activity Report 2022.	Ongoing
Other comments			
P9_TA(2022)0167 paragraph 38	Notes that the Centre has developed a comprehensive strategy to achieve cost-effectiveness and environmental protection; notes that the Centre is currently in the implementation phase of its environmental management system, which is based on the European Eco-management and Audit Scheme; calls on the Centre to report to the discharge authority on the developments in this regard.	ECDC has finalised the first phase of the implementation of its environmental management system, based on the European Management Audit Scheme (EMAS), which will include CO2 reduction targets. Furthermore, ECDC has now introduced new sustainable travel guidelines. ECDC has been operating in its new premises since March 2018 and relies 100% on a renewable source of energy (hydropower) for its electricity. The premises have been environmentally certified as a 'Green building' since 2008 and the building received the environmental certification 'BREEAM Very Good in use' in 2020. Building Research Establishment Environmental Assessment Method (BREEAM) is the world's leading sustainability assessment method for master planning projects, infrastructure and buildings.	Ongoing

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
P9_TA(2022)0167 paragraph 40	Highlights the importance of increasing the digitisation of the Centre in terms of internal operation and management but also the importance of speeding up the procedures; stresses the need for the Centre to continue to be proactive in this regard in order to avoid, at all costs, a digital gap between the EU agencies.	In 2021, ECDC continued its efforts towards delivering efficiency gains. The Integrated Management Framework (IMF) Working Group was established to support the preparation of the implementation roadmap for the IMF. This roadmap was finalised at the beginning of 2022. The introduction of new methodologies, including the automation of support and operational processes as critical for achieving and sustaining further efficiency gains, continued in 2021. In 2021, five new administrative processes were automated through electronic workflows and four of these were to automate all internal procurement preparation steps. A feasibility study was undertaken to find a more sustainable and cost-effective solution for the platform for electronic workflows. An overall analysis of the use of the electronic workflows already shows a significant adoption by users and a clear reduction of process time, due to the elimination of unnecessary steps, while ensuring legal compliance. ECDC is also engaged in a number of joint procurement activities with other EU agencies and is using shared IT services (such as the disaster recovery centre of EUIPO).	Ongoing
P9_TA(2022)0167 paragraph 41	Stresses the need for the Centre to ensure that there is full transparency when publishing scientific studies and by enhancing its external communications capacity towards the general public, and to ensure that all key information related to public health emergencies is available in all official languages of the EU and easily accessible to EU citizens.	A number of ECDC publications for the general public are provided in all official EU languages, plus Icelandic and Norwegian. Due to the need for timeliness and rapid updates during emergencies linked to the character of infectious diseases, as well as the high cost of translations, content targeted towards the expert community is provided primarily in English. This is described in greater detail in ECDC's language policy , and in the Communication Policy 2022–2027, approved by the ECDC Management Board at the end of 2021. Since 2020, ECDC has translated some reports and communication materials related to COVID-19 including: - Facilitating COVID-19 vaccination acceptance and uptake in the EU/EEA - Considerations relating to social distancing measures in response to COVID-19 - Video: How do COVID-19 mRNA vaccines work? - Video: Why were COVID-19 mRNA vaccines developed so fast?	Ongoing

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
		Other COVID-19 content which has been translated is available here: https://www.ecdc.europa.eu/en/covid-19/latest-outputs/translated-guidance. The European Vaccination Information Portal (EVIP) is translated into all official EU languages, with regular publication of new content and updates with the respective translations. EVIP is a website that provides accurate, objective, up-to-date evidence on vaccines and vaccination. It is an initiative of the EU and was developed following the Council Recommendation on Strengthened Cooperation against Vaccine-preventable diseases. It was created in close coordination with the European Commission DG SANTE and the European Medicines Agency. In the context of Russia's invasion of Ukraine, ECDC produced reports and communication materials which were translated into several EU languages, focusing on the countries neighbouring Ukraine, for example: - Guidance for the prevention and control of COVID-19 in temporary reception centres in the context of the large numbers of people fleeing Ukraine - Operational public health considerations for the prevention and control of infectious diseases in the context of Russia's aggression towards Ukraine - Infographic: Vaccinations to be offered in the absence of documented evidence of prior vaccination Selected materials and content on the European Antibiotic Awareness Day (EAAD) campaign website are also available in Icelandic and Norwegian. In 2021, a collaboration with 27 social media ambassadors from 19 EU/EEA countries who highlighted EAAD key messages on prudent use of antibiotics and antibiotic resistance in their national languages was also established. Messages on mpox disseminated through dating apps were translated, as well as animations – e.g. a video on HIV PrEP.	
P9_TA(2022)0167 paragraph 41	Notes that, regarding the follow-up to the Court's report for the financial year 2019, the Centre is preparing a new and updated cybersecurity policy in anticipation of the entry into force of an EU Regulation on common cybersecurity rules; notes that, as part of its efforts to	ECDC has updated its information security policy and created a cybersecurity policy, including plans for specific activities over the next four years. ECDC has also created an Information Security Management System (ISMS)	Ongoing

Reference	Observation of the Discharge Authority	Response and measures taken by ECDC	Status/reference
	strengthen cyber-security, the Centre is considering investment in an information security project and a cyber-security awareness and training programme from 2022 onwards; calls on the Centre to report to the discharge authority on the developments in this regard.	with associated execution, monitoring, support and auditing processes. ECDC has also increased its IT security staffing, with the redeployment of an internal member of staff and the recruitment of a cybersecurity solution architect, taking the total in the IT security team to three FTEs. ECDC has expanded its security awareness and training effort with a new cybersecurity e-learning course and continues to set up phishing tests and organise awareness campaigns for all staff. Finally, ECDC is in the process of setting up a Security Authority as specified in the upcoming EU Information Security Regulation. The Security Authority will take responsibility for security governance, risk and compliance at ECDC.	

10. Environment management

ECDC is implementing an environmental management system based on the EU Eco-Management and Audit Scheme (EMAS) and will subsequently be working towards achieving EMAS certification. In addition, the ECDC premises are environmentally certified as a 'green building' since 2018. In December 2020, ECDC's building received the environmental certification 'BREEAM Very Good'.

11. Assessment by management

The year 2022 was the third consecutive year for ECDC working under circumstances never faced before. Given the magnitude of the pandemic, even though it began to subside, a large number of experts continued to be diverted from their core tasks. Despite this, the Agency was able to deliver most of its prioritised core activities. ECDC has tried to implement the lessons learned from this experience while working in response mode, and this learning will continue after the pandemic.

ECDC conducts its operations in compliance with relevant legal requirements in an open manner to maintain its scientific independence and achieve high professional standards. The Agency regularly monitors the implementation of the action plans based on ECA and IAS audit recommendations. In 2021, ECDC closed all the audit recommendations from previous years, and the review of ECDC's Internal Control Framework did not expose any significant shortcomings.

Part 2b. External evaluations

ECDC's Founding Regulation requires the Centre to organise external evaluations every five years to assess its performance in relation to its mission. The third Independent External Evaluation of ECDC, conducted by Price Waterhouse Cooper (PwC), was concluded in 2018–2019. The report looked at the period 2013–2017. The evaluation provides insights into the progress made since the previous evaluation and points out areas for further improvement. The evaluation concluded that 'ECDC has successfully supported the EU and national policy priority areas and demonstrated the capacity to successfully adapt to policy developments, confirming the relevance of its activities'. ECDC's coherence and coordination with other relevant bodies was also evaluated positively.

In response to the evaluation, the Management Board adopted a set of recommendations at its March 2020 meeting. Based on the recommendations of the Board, ECDC developed an action plan for the implementation of actions and presented a progress update to the Management Board in March 2021 and March 2022.

A short progress update on the implementation of the Management Board recommendations is presented below. The full text of the recommendations from the third external evaluation and the recommendations of the Management Board are available on ECDC's website¹⁸:

Recommendation 1: The Management Board suggests that gaps identified in Member State public health systems should be shared with the Member States and the European Commission to support countries in the most appropriate way.

ECDC should develop country knowledge to advise the European Commission on priorities for national capacity strengthening and measures which could be supported by EU instruments described above, including surveillance, preparedness, and training.

In 2022, ECDC continued the work to establish the foundations of a solid targeted country support approach. These included the development of country overview dashboards; a corporate approach to country mission reports and a draft list with funding resources available in the EU. The development of the country overviews advanced by deciding on the indicators to be visualised and contracting out the visualisation (first full release to be ready by mid-June 2023). Internal discussions on aggregated indicators have also started. At the same time, ECDC provided specific targeted support to selected EU/EEA Member States through two Director-led initiatives: an initiative to support the 11 Member States with COVID-19 vaccination uptake lower than the EU average and an initiative to support five Member States in the neighbourhood of Ukraine. More information on the actions implemented is available in Part 1. Policy Achievements, Strategic Objective 2, of this report.

Recommendation 2: ECDC's mandate under Decision 1082/2013/EU

2A. The Management Board recommends that the European Commission and ECDC examine how the allocation of preparedness tasks between the two stakeholders could be more clearly communicated and described, particularly, in relation to the terms of reference of Health Security Committee working groups, expected deliverables and their timelines, and the processes for their validation.

The European Commission and ECDC should prepare information packages for ECDC stakeholders and HSC members to clarify roles and responsibilities in the area of preparedness.

Preparedness is an important element in the strengthened ECDC mandate. Preparedness-related tasks and outputs are clearly defined (Art. 5b). In 2022, where possible, joint activities for ECDC National Focal Points were organised to ensure coherency and efficiency in terms of the scope and frequency of meetings. ECDC also avoids the creation of new focal points for related, but slightly different objectives (e.g. the EU Health Task Force.) The European Commission will present plans for the creation of HSC working groups in 2023.

2B. The Management Board invites ECDC to install a systematic feedback system on the use and relevance of rapid risk assessments. The Management Board endorses the further involvement of the CCBs in the preparation of rapid risk assessments, as this can be expected to increase the relevance of the assessments, stakeholders' buy-in to their results and follow-up.

Following this recommendation, the Centre has been involving the Advisory Forum and relevant networks in the preparation of rapid risk assessments since February 2021. In 2022, the consultation process on rapid risk assessments was also part of the CCB agenda. The draft rapid risk assessments are systematically shared with Member States, the European Commission, WHO, and the Advisory Forum prior to publication. The usefulness of rapid risk assessments is also included as a question in the stakeholder satisfaction survey and shows their use for communicating with target audiences and making changes to national policies and recommendations. The relevance and scientific quality of rapid risk assessments on COVID-19 received 95% and 94% satisfaction respectively.

¹⁸ Available from <https://www.ecdc.europa.eu/en/publications-data/third-external-evaluation-ecdc-2013-2017>

Recommendation 3: ECDC's international activities

The Management Board calls upon the European Commission to develop a substantiated process to ensure a long term and structural agreement on the use of ECDC resources in support of external requests.

The Management Board is committed to taking a stronger role in evaluation, monitoring and validation of ECDC's international activities to ensure that the strategic priorities are met.

Regulation (EU) 2022/2370 of the European Parliament and of the Council of 23 November 2022 amending Regulation (EC) No 853/2004 establishing a European centre for disease prevention and control, provides for a reinforced international role for ECDC, to foster the Centre's contribution to EU international cooperation and commitment to global health security preparedness. In light of these developments, ECDC intends to further intensify and expand its collaboration with European and international partners, in particular WHO, EU candidate countries and potential candidates and European Neighbourhood Policy (ENP) partner countries, Centres for Disease Control (CDCs) in third countries and supranational CDCs. Three actions funded by the European Commission (DG NEAR and DG INTPA) are currently being implemented by ECDC: 1) 'Preparatory measures for the participation of the Western Balkans and Türkiye in the ECDC with special focus on One-Health against AMR and enhanced SARI surveillance, 2020–2024, 2) 'EU Initiative on Health Security' 2020–2025 to support collaboration with the ENP partner countries, and 3) 'EU for Health Security in Africa: ECDC for Africa CDC' 2021–2024. All three projects are being implemented by ECDC staff and the project staff recruited for this purpose. Preliminary discussions with the respective services of the Commission on the long-term sustainability of the projects have already been initiated, however structured discussions and collaboration with third countries are not expected to take place until next year.

Recommendation 4: Collection, validation, analysis, and dissemination of data

4A. The Management Board agrees that it would be important for ECDC to better understand the root causes for low reporting to be able to provide the right type of support to Member States. ECDC should therefore take action to gather information on this matter from the Member States.

Following the COVID-19 pandemic a number of converging initiatives were launched as a collaboration between ECDC, SANTE and HERA which aim to address some of the root causes of poor data quality. These include national grants for building WGS capacity; specific training in bioinformatics; ECDC support to facilitate the use of digital health information for surveillance of SARI and, from 2023, bloodstream infections; a Member States joint action on surveillance (United4Surveillance), within which one of the first deliverables will be an assessment of gaps in Member State surveillance systems, and the EU4Health programme 2023 which, informed by the Joint Action, foresees the allocation of EUR 97.3 million to Member States to addressing such gaps. Furthermore, as part of the new Regulation on Serious Cross Border Health Threats and the strengthened ECDC mandate, regular assessment of the status of EU and Member State preparedness will include preparedness to carry out effective surveillance in a pandemic. In 2022, ECDC published guidance for integrated surveillance of respiratory infections, based on Member State input describing current challenges with COVID-19 surveillance.

4B. Concerning the involvement of Member States' experts in the analysis of TESSy data and other ECDC outputs, the Management Board view was that Member State involvement is beneficial, especially on those products that add the greatest value, although it is important to be careful about aspects such as conflict of interest.

Member States are involved in the process of analysis and interpretation of TESSy data, including the possibility to review analyses before publication in the restricted version of the Atlas. Member States are also involved in all scientific publications based on surveillance data, from the conception of the manuscript to the decision on analyses to be carried out and the final revision of the text. For example, in 2022, in addition to the routine reports, this was the case for new diseases such as mpox and severe hepatitis of unknown origin in children.

Recommendation 5: Awareness and use of ECDC's outputs

The Management Board stated that raising awareness and communication to national audiences is the primary responsibility of the Member States. The key to success is for ECDC to continue providing Member States with evidence-based and objective information.

The Management Board considers that reaching out to media stakeholders can be most effective and successful in the context of existing global public health campaigns, such as EAAD (and WAAW), European Immunisation Week, World TB day and World AIDS Day. As far as rapid risk assessments are concerned, they are promoted at the HSC to facilitate the coordination of measures between Member States.

The Management Board invites ECDC to present an analysis of its communication strategy and adapt it and supports the monitoring of communication activities.

Recommendation 7A. Recommendation related to translation of certain documents published on ECDC website in different languages 'to make ECDC and its contribution to communicable disease prevention and control in Europe more visible to the general public and known as an objective and reliable source of information'.

The ECDC Communication Policy was developed and approved by the Management Board in 2021. This policy defines the actions for the period 2022–2027 and the Centre's target audiences, (including the general public) stakeholders, and internal and external priorities. It also reflects the needs of its target audiences and stakeholders and their media use, as well as the current trends and innovations in risk communication, crisis communication, and behavioural/social science research.

Throughout 2022, ECDC supported COVID-19, mpox and hepatitis communication and delivered campaigns for several awareness days such as World Tuberculosis Day, World Hepatitis Day, World Hand Hygiene Day, World Field Epidemiology Day, Flu Awareness Week, European Immunisation Week, World AIDS Day, and European Antibiotic Awareness Day. This involved a variety of communication actions, some of which were translated and shared with partners and stakeholders across the EU. Template materials were shared on several occasions with the National Focal Points for Communication for national adaption, and ECDC participated in the HSC Communicators Networks, providing input in the form of lines to take or specific key messages on key topics, when requested.

Recommendation 6: Coordination and complementarity

6A. The Management Board recommends that, under the MoU between ECDC and WHO Regional Office for Europe, areas for improvements are addressed by the Joint Coordination Group which will report back to the Management Board.

6B. The Management Board recommends that ECDC should be fully involved in both the planning and implementation of all joint actions that impact on, or could benefit from the Centre's activities, to ensure they are more efficient. ECDC should be invited systematically by the European Commission to participate during the planning stage of the joint actions and should integrate them into its planning process.

ECDC continued its active collaboration with WHO, defining a list of actions on an annual basis, most of which were successfully implemented in 2021 despite the high workload related to the pandemic (implementation rate of 87% in 2022 and 85% in 2021). More information is available in Part 1. Policy Achievements, Strategic Objective 4, of this report.

A continuous dialogue was maintained with the Directorate-General for Research and Innovation (DG R&I) and DG SANTE on future research actions and ECDC's role in 2021, and this included discussions on the revision to the ECDC mandate and the legislative proposals for revision to the Regulation on cross border threats to health and the establishment of the European Health Emergency preparedness and Response Authority (HERA).

Recommendation 7: Implementation of a common approach on EU decentralised agencies and its roadmap

(7A covered with recommendation 5)

7B. Recommendation to provide more systematic feedback to the Management Board on the Advisory Forum's meetings and its annual report, and to communicate the budget and human resources allocated to activities earlier (e.g. prioritisation, planned projects and highlight of new activities).

The Management Board receives feedback on the Advisory Forum meetings annually through the consolidated report of the Chief Scientist and also if a topic on the agenda has been discussed in the Advisory Forum. From the beginning of 2022, the Management Board received a report on the state of play of the annual work programme implementing, providing links to the budget execution.

The Centre already presents its Single Programming Documents (SPD) twice to the Management Board: in November year N-2 (draft SPD) and in November N-1 (final SPD), with the newly planned activities are clearly identified.

Recommendation 8: Efficiency

Several specific recommendations were made to improve the efficiency of ECDC in terms of its organisation and process. They covered the cooperation between the Management Board and Advisory Forum, the systematic review and reporting ensuring prioritisation mechanisms are put in place, the effort to use more outcome-level indicators and ensuring appropriate follow-up of recommendations resulting from evaluations.

The Centre is continuing its efforts to ensure enhanced collaboration between the Management Board and the Advisory Forum. As per 2022, the Chief Scientist will share his annual report with both the Advisory Forum and the Management Board.

As part of its IceCube programme, a feasibility study to identify options for a new planning and monitoring tool was finalised in 2022, and a decision was taken to use a tool on a Microsoft platform, which will be piloted in 2023. A PowerBI tool was tested for process mining in order to identify bottlenecks, inefficiencies and lack of compliance in automated processes. In 2021, the Centre automated five additional processes with K2, thus reaching a total of 15 automated processes, which are being maintained during 2022. A roadmap for the implementation of the Centre's Integrated Management Framework was also approved.

Part 3. Assessment of the effectiveness of internal control systems

1. Effectiveness of internal control systems

1.1 Methodology applied for assessing the effectiveness of the internal control system

ECDC assesses the effectiveness of the internal control system at least once a year by assessing the implementation of the internal control framework, including the implementation of the indicators defined, and by evaluating the main shortcomings identified by ECDC itself or reported by others, including the Internal Audit Service and the European Court of Auditors.

1.2 Internal control framework

The Management Board adopted the new ICF at its 43rd meeting in November 2018. As of 2019, the ICF formed the basis for ECDC's internal control system.

ECDC's ICF is designed to provide reasonable assurance of the achievement of the five objectives set in Article 30 of the ECDC Financial Regulation:

- effectiveness, efficiency and economy of operations;
- reliability of reporting;
- safeguarding of assets and information;
- prevention, detection, correction and follow-up of fraud and irregularities and
- adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments concerned.

The framework supplements the ECDC Financial Regulation and other applicable rules and regulations, with a view to aligning ECDC standards with the highest international standards. The framework implemented by the European Commission served as a basis for defining principles and their characteristics.

The internal control system at ECDC is based on the five internal control components:

- the control environment;
- risk assessment;
- control activities;
- information and communication and
- monitoring activities.

These are the building blocks that underpin the framework's structure and support the Agency in its efforts to achieve its objectives. The five components are interrelated and must be present and effective at all levels of the organisation for internal control over operations to be considered effective.

Each component of the internal control system adheres to several principles which facilitate the system's implementation and make it possible to assess the system's operability at the management level. Working with these principles helps provide reasonable assurance that the organisational objectives are met. The principles specify the actions required for internal control to be effective.

The internal control framework moves away from a purely compliance-based to a principle-based system, whereby the managers are offered the necessary flexibility to adapt to specific situations, characteristics and circumstances while ensuring robust internal control and consistent assessment throughout the Agency. This approach is designed to help the organisation achieve its objectives and sustain operational and financial performance by establishing diverse and objective-based managerial processes that meet each entity's specific needs.

Ongoing monitoring of the effective functioning of internal control is built into business processes and performed on a real-time basis at all levels of the organisation. This enables the entities to react in a timely manner to changing conditions and correct deviations from intended performance and effectiveness.

The Agency must be able to demonstrate not only that controls are in place but also that these controls are effective at managing risks and that they work as intended. Internal control principle 16 states that the assessment of internal control is founded both on ongoing (continuous) monitoring and specific (periodical) assessments to ascertain whether the internal control systems and their components are present and functioning. ECDC must carry out an overall assessment of the presence and functioning of all internal control components at least once a year.

In 2019 the ICF was further reinforced with detailed indicators that were approved by the Management Board in November 2019, with a revision of the indicators performed in June 2020 as agreed with the Board. The ICF was further amended by the Board, following the IAS final report on the 'limited review of the implementation of the new ECDC Internal Control Framework' at the November 2021 meeting to reflect the IAS recommendations. Furthermore, in 2022, it was decided to add a number of survey-based indicators in time for the ICF assessment to be performed in January 2023 for the Consolidated Annual Activity Report 2022. The results for the survey-based indicators are taken from two ECDC surveys (the ECDC Staff Engagement Survey and the ECDC Internal Control Survey.) The plan is to run these surveys bi-annually. In total, 44 new survey-based indicators have been added to the ICF.

The implementation of the ICF is assessed annually and a report is sent to the Audit Committee of the Management Board. The assessment of the ICF for 2022 was performed in January/February 2023 and presented to the Audit Committee in March 2023.

The main conclusions were as follows:

- The self-assessment performed in relation to the implementation of the internal control framework showed that the internal control system is present and functioning, but some improvements are needed.
- At the component level, one component (Monitoring Activities) is in place and functioning well, with no or only minor improvements needed, and four components are present and functioning, but with some improvements needed.
- At the principles level, 10 principles are in place and functioning well with no or only minor improvements needed, while seven principles are present and functioning, but with some improvements needed.
- Overall, 40 characteristics were rated as being 'in place and functioning well, with no or only minor improvements needed', 10 characteristics were rated as 'control system is present and functioning, but some improvements are needed', and no characteristics were rated as being 'partially present and functioning, major improvements are needed' and or 'not present and functioning'.
- In 2022, a number of improvements were made to the internal control framework, such as an improved ECDC Control Strategy, including new indicators, an improved ECDC Information Asset Catalogue and the development of a new internal communications policy.

1.3 Implementation and monitoring of the agency's policies for the prevention and management of conflict of interest

It is important that ECDC's products and communications are scientifically correct and impartial. As ECDC relies on many internal and external experts who together shape the Centre's scientific position, it introduced an independence policy in 2016 that ensures transparency and identifies risk of conflicts of interest. The policy has since been split into two documents, with one document covering non-staff, including Management Board and Advisory Forum members, and the other covering ECDC staff, including the ECDC Director and the heads of unit. A compliance officer oversees the implementation of this policy. An electronic system for the submission of declarations of interest minimises the amount of errors in submitted documents. This facilitates the implementation of the independence policy and increases the compliance rate.

ECDC continued to apply and strengthen its independence policy for non-staff and staff members. In 2022, the Centre lacked only a very small percentage of declarations: 3% of the appointed Management Board members/alternates did not file their annual Declaration of Interest (DoI), 3% of the appointed Advisory Forum members/alternates failed to submit. All external experts consulted during the production of rapid risk assessments declared their interests before publication. It should be noted that all members of the Management Board and Advisory Forum attending the meetings and thus contributing to the discussions had valid annual DoIs. The Director and Heads of Unit filled their annual DoIs and 99%¹⁹ of external experts attending ECDC meetings that required a conflict-of-interest check submitted an annual DoI.

2. Conclusions of internal control system assessment

Given the control system in place, the information obtained from the building blocks of assurance (see below) and the lack of critical findings from the Court of Auditors and the Internal Audit Service at the time of the declaration, there is no reason to question the effectiveness of the internal control system in place. However, some improvements are needed regarding the implementation of the internal control framework (as explained in paragraph 1.2 of 'Internal Control Framework' above).

The overall conclusion is that the internal control system is present and functioning, but that some improvements are needed.

¹⁹ Data covers period end of October 2022 due to some meetings being carried forward to 2023 that are yet to be held.

3. Statement of the manager in charge of risk management and internal control

Statement of the Manager in charge of risk management and internal control

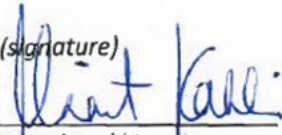
I, the undersigned,

Manager in charge of risk management and internal control within ECDC,

In my capacity as Manager in charge of risk management and internal control, I declare that in accordance with ECDC's Internal Control Framework, I have reported my advice and recommendations on the overall state of internal control in the Agency to the Director.

I hereby certify that the information provided in the present Consolidated Annual Activity Report and in its annexes is, to the best of my knowledge, accurate, reliable and complete.

Place Solna date 27 February 2023

(signature)

Maarit Kokki
Head of Executive Office

Part 4. Management assurance

1. Review of the elements supporting assurance

The main building blocks of the Director's Declaration of Assurance are:

- The Director's own knowledge of the management and control system in place;
- The declarations of assurance made by each Authorising Officer by delegation to the Director;
- The results of the self-assessment of internal control;
- The results of the self-assessment of the implementation of the Internal Control Framework;
- The results of the specific assessment performed;
- The results of the risk self-assessment exercises;
- The analysis and list of recorded exceptions;
- The status on the internal control and quality weaknesses reported;
- The results of the grant verifications known at the time of the declaration;
- The summary of OLAF activities;
- The summary of the implementation of the ECDC Independence Policy;
- The report from the Data Protection Officer;
- The observations of the European Ombudsman known at the time of the declaration;
- The observations of the Internal Audit Service known at the time of the declaration;
- The observations of the European Court of Auditors known at the time of the declaration.

There were no significant weaknesses reported from these building blocks of assurance that are considered to be of such a significance that they would have an impact on the Director's Declaration of Assurance.

2. Reservations

2.1 Materiality criteria used regarding reservations

The concept of materiality provides the authorising officer with a basis for determining if an identified weakness should be subject to a formal reservation in the declaration of assurance.

When defining whether an identified weakness is material, ECDC assesses both qualitative and quantitative aspects:

2.1.1. Qualitative criteria

2.1.1.1 Weaknesses leading to critical operational damage

A detected weakness in the design or operation of ECDC's internal controls (affecting the Director's Declaration of Assurance) that would lead to critical operational damage.

The severity of the operational damage is mainly assessed through the size and sensitivity of the issue and area concerned and the potential damage to ECDC and its operations.

2.1.1.2 Weaknesses leading to critical reputational damage

A detected weakness in the design or operation of ECDC's internal controls (affecting the Director's Declaration of Assurance) that would lead to critical reputational damage.

The severity of the reputational damage is mainly assessed through the size and sensitivity of the issue and area concerned and the potential damage to ECDC's reputation, including the level of public interest.

2.1.1.3 Critical observations by auditors or OLAF

A critical observation made by the European Court of Auditors, the Internal Audit Service or OLAF could lead to a reservation.

ECDC considers whether the observation is made in an area covered by the Director's Declaration of Assurance, whether the issue was solved immediately during the reporting period, and whether the impact is potentially material.

2.1.2. Quantitative criteria

A quantifiable weakness in the control system is defined as material when ex-ante or ex-post controls detect errors regarding the legality and regularity of the underlying transactions of 2% or more (financial impact).

Therefore, if the most likely error affecting the underlying transactions for the internal control system/area in question is 2% or more, a reservation should be made.

However, the reservation is only made if the internal control system/area affected by the potential reservation represents 2% or more of the total payments made by ECDC for the year in question (for 2022 set at a minimum of EUR 1.8 million). Otherwise no financial reservation is made (without prejudice to a reservation for qualitative reasons).

The rate of 2% is based on the materiality rate applied by the European Court of Auditors.

2.2 Reservations for 2022

None.

Part 5. Declaration of assurance

Declaration of Assurance

I, the undersigned, Director of the European Centre for Disease Prevention and Control (ECDC),

In my capacity as authorising officer,

Declare that the information contained in this report gives a true and fair view¹.

State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the Internal Audit Service and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the European Centre for Disease Prevention and Control (ECDC).

Stockholm, 27 February 2023



Andrea Ammon

Director

Annex 1. Core business statistics 2022

In 2022, ECDC delivered 89% of the outputs planned in its Single Programming Document 2022–2024. A total of 8% of the planned outputs were postponed, while 3% were delayed or cancelled at the end of the year.

The following table provides the detail on the implementation of the 2022 Work Programme by SPD objective and related outputs.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
Strategic Objective 1: Strengthen and apply scientific excellence in all ECDC's activities and outputs to inform public health policy and practice				
Area 1.1 Standards				
Area 1.1 Standards	1.1.1 Operationalise the results of EPHESUS project and the lessons learned from the COVID-19 pandemic	Proposal for EU surveillance standards	Partially implemented	Respiratory viral surveillance guidance published
	1.1.2 Guiding principles and standards for the design, production and dissemination of ECDC outputs and quality assurance procedures will be agreed and established for key outputs and studies, in consultation with ECDC stakeholders.	Publication of principles and standards and revision, if necessary, of relevant ECDC policies and procedures.	Implemented	Policy on Scientific Integrity and Independence completed. Policies on open access and authorship revised and commitments renewed. Work on revision of internal procedures to produce scientific outputs, including scientific advice and recommendations, ongoing taking into consideration changes to the Centre's mandate.
	1.1.3 Ensure and demonstrate scientific independence in all ECDC activities in consultation with relevant stakeholders [on standards for safeguarding and demonstrating scientific independence].	Report on implementation of procedures to ensure and demonstrate scientific independence.	Implemented	Policy on Scientific Integrity and Independence approved by Advisory Forum and Management Board.
Area 1.2 Evidence				
Area 1.2 Evidence	1.2.1 Ensure timely and effective monitoring of potential threats from infectious diseases.	Daily Round Table report and weekly Communicable Diseases Threat Report (CDTR) available on EpiPulse.	Implemented	
		Publication of weekly CDTR on website	Implemented	
		Stakeholders access real-time information on current signals, events and threats via EpiPulse.	Implemented	
	1.2.2 Carry out routine indicator-based surveillance, including generation of high-quality, relevant, and timely outputs.	Data on reportable diseases collected in a consistent way, according to Implementing Decision 2018/945.	Implemented	
		AER published (full scope of diseases/public health issues covered will depend on the amount of work needed to support COVID-19 response).	Partially implemented	In total, 10 of 65 chapters for 2021 published; remaining chapters deprioritised due to public health emergencies.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	1.2.3 Coordinate EU level surveillance of all EU notifiable diseases and special health issues (incl. coordinated lab support).	Atlas of Infectious Diseases updated with newest data.	Partially implemented	Atlas updated for 45 of 61 diseases.
		Stand-alone surveillance reports, including HIV/AIDS report, TB surveillance and monitoring report, Euro GASP report, weekly FluNewsEurope bulletin (incorporating COVID-19), regular influenza and coronavirus characterisation reports, monthly measles and rubella monitoring report, monthly ELDSNet report, zoonoses and zoonotic AMR monitoring reports, AMR, antimicrobial consumption, HALs.	Implemented	HIV/AIDS surveillance report, TB surveillance and monitoring report, Euro-GASP report published. Weekly FluNewsEurope bulletin, COVID-19 weekly bulletin, regular influenza and coronavirus characterisation reports published. Monthly ELDSNet report and zoonoses and zoonotic AMR monitoring reports published. EU surveillance reports on 'One Health' and AMR published in collaboration with EFSA. Monthly measles and rubella monitoring report published. AMR, antimicrobial consumption and <i>Clostridioides (Clostridium) difficile</i> reports published.
		Seasonal, real-time surveillance of vector-borne diseases to support blood safety measures.	Not reported	
	1.2.4 Provide evidence to support Member States in increasing public health microbiology capacity.	External Quality Assessment (EQA) reports (Euro GASP, Legionnaires' disease EQA-report, EVD-LabNet activities, COVID-19, AMR for EARS-Net participating laboratories, and in the area of vaccine-preventable diseases with specific focus on diphtheria, pertussis, invasive bacterial diseases, as well as schemes for <i>Salmonella</i> , <i>Campylobacter</i> , <i>Listeria monocytogenes</i> , and STEC).	Implemented	Euro-GASP EQA report published. Legionnaires EQA started and ongoing. <i>Listeria monocytogenes</i> EQA published. Next round of <i>Listeria monocytogenes</i> , <i>Salmonella</i> and STEC ongoing. EQA for AMR of <i>Salmonella</i> and <i>Campylobacter</i> are ongoing. All to be published in 2023. EVD-LabNet activities were undertaken. EQA report on pertussis published. EQA on AMR for EARS-Net participating laboratories published.
		EU Laboratory Capability Monitoring System (EULabCap) reports.	Postponed	The EULabCap Survey was sent to Member States in December 2022 and the report will be published in 2023.
		Public health microbiology training sessions (EVD-LabNet activities, European Reference Laboratory Network for Human Influenza (ERLI-Net) activities, SARS-CoV-2 and influenza)	Implemented	EVD LabNet- three scientific webinars delivered: emerging alphaviruses, rodent-borne diseases and tick-borne encephalitis in Europe. In addition, an online training course was organised on emerging alphaviruses. SARS-CoV-2 and influenza: bioinformatics training, EQAs, ring trials, and antigenic characterisation.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
		Other outputs (e.g. technical reports and handbooks).	Implemented	Updated pertussis laboratory handbook published on the website.
	1.2.5 Produce consistently high-quality scientific work and advice within agreed deadlines to support evidence-informed decision and policy-making.	High-quality ECDC scientific advice outputs published on the Centre's website and/or as open access publication if published in peer-reviewed scientific journals.	Implemented	In total, 98% of ECDC publications in peer-reviewed journals were published as golden open access.
	1.2.6. Ensure that all public health related ECDC actions are reviewed through the IRIS instrument for consultation on priority setting.	IRIS proposals and the Advisory Forum assessments.	Implemented	IRIS proposals on implementation of the 3 rd Joint Strategy Meeting recommendations (2023–2025) reviewed during AF70.
	1.2.7 ECDC provides its partners with evidence-based facts and guidance to support the decision-making process in the Member States.	Review report delivered	Implemented	See 1.2.5 for metrics
	1.2.8 Establish a repository for collation of guidance developed by national authorities and professional bodies in EU Member States.	Repository available and the procedures (including quality standards) for inclusion of documents agreed with Advisory Forum.	Partially implemented	Repository developed for SoHO Biovigilance Guides that have been issued across Member States.
	1.2.9 WGS services	National isolates sequenced by ECDC in the context of multinational outbreaks	Not reported.	
Area 1.3 Methodologies				
Area 1.3 Methodologies	1.3.1 Ensure the transparent, consistent and efficient production and clearance of scientific work and advice.	The Scientific Advice Repository and Management System (SARMS) provides a comprehensive overview of the Centre's scientific outputs, supports peer-review and quality assurance, ensures compliance with ECDC policies, standards and processes/procedures and monitors responsiveness to external requests to the Centre.	Implemented	SARMS includes templates, checklists and guidance, and is continuously revised and improved to support the production of the Centre's scientific outputs, including scientific advice and recommendations. The system also functions as a searchable repository of outputs. All outputs intended for publication on ECDC's website or for submission to conferences or peer-reviewed journals, as well as all outputs with scientific content in response to external requests received by the Centre are reviewed and formally cleared by at least two senior staff before dissemination. This ensures quality and compliance with policies and standards. An overview of produced and planned outputs is extracted from SARMS and presented to the ECDC Advisory Forum every year and made available on the Centre's website.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	1.3.2 Additional indicators are developed so that ECDC stakeholders can evaluate/assess their national public health policies and practices more easily.	Catalogue of indicators	Partially implemented	ECDC frameworks, such as the EULabCap, include indicators developed in close collaboration with National Focal Points for Microbiology in the EU/EEA countries and the ECDC Advisory Forum, to help evaluate current practices and policies and identify possible areas for action. Additional frameworks and indicators are currently being developed for other areas than laboratory capacity (see e.g. 1.4.1).
	1.3.3 Methodologies to increase the impact of public health actions are developed.	Gap/needs analysis tool available for use.	Partially implemented	Review of evidence from Implementation Science literature completed to identify methodologies to increase the impact of public health actions.
Area 1.4 Knowledge transfer				
Area 1.4 Knowledge transfer	1.4.1 Enhance impact of ECDC outputs by strengthening the relevance, accessibility, & timeliness of scientific advice and information products.	Framework of indicators of impact	Partially implemented	ECDC is developing an impact assessment framework and set of indicators to help strengthen the relevance and assess the impact of its scientific outputs. A draft was presented to the ECDC Advisory Forum in 2022. The framework will be made available in 2023 following further technical consultation.
	1.4.2 Organise the annual European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE), in cooperation with the Member States, the European Commission (including SANTE, CHAFAE, JRC) and other EU agencies, and include a 'knowledge for policy and practice' track in the ESCAIDE conference.	2022 edition of ESCAIDE	Implemented	A total of 600 on-site and 2 500 on-line participants with 94% indicating they were 'extremely' or 'very much' satisfied with the conference.
		ESCAIDE track on knowledge for policy and practice	Implemented	'Knowledge for policy and practice', session included in ESCAIDE 2022 programme (as well as several other sessions that focused on science for policy and practice.
	1.4.3 Ensure production and wide dissemination of Eurosurveillance as a high-quality journal with good visibility.	50 issues of Eurosurveillance	Implemented	All 50 issues published as planned on Thursdays.
		Scientific seminar at international conference	Implemented	Two seminars conducted – ESCAIDE: Communicating science: social media and other means. Pitfalls and benefits, 24 Nov 2022. ECCMID: When science gets politicised; experiences from the COVID-19 pandemic, 24 April 2022.
		Board meeting with action points for 2023.	Implemented	Hybrid editorial board meeting 13/14 October; minutes sent 19 Dec 2022.
	1.4.4 Contribute to targeted knowledge transfer to readers and	Up-to-date editorial policies, following publication of ethical guidelines.	Implemented	Continuous updates as necessary, NEW: ECR and key public health messages instructions.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	contributors, including ECDC experts.	Workshops on the margins of ECDC-organised events (ESCAIDE, ECDC summer school, traineeship project review module) at ECDC or at national public health institutes.	Implemented	ECDC traineeship project review module workshop on predatory journals, in-house webinar on peer-review during peer review week; revived ECDC journal club.
		Format for series of educational 'How to series' devised.	Cancelled	Deprioritised following guidance from Editorial Board.
	1.4.5 Strengthen the dissemination and communication of ECDC key scientific outputs to ensure they reach their target audience and are accessible at no cost for the user.	ECDC scientific outputs published on the website and/or 'pushed' through tailored dissemination channels.	Implemented	ECDC website navigation has been redesigned to improve accessibility and findability of scientific outputs. The search feature on the ECDC website has been fundamentally redesigned. Development work is ongoing and will launch in Q1/Q2 2023. A total of 98% of scientific outputs in peer-reviewed publications published as open access. All ECDC communication outputs were published on the website and disseminated through different communication channels following the ECDC Annual Communication Plan. More information about impact is available under Objective 5.
	1.4.6 Strengthen internal processes for creating, capturing, sharing and effectively leveraging internal ECDC knowledge.	Implementation of Enterprise Content Management Platform	Implemented	The new internal Enterprise Content Management Platform (replacing the old Document Management Platform, Intranet and Collaboration Sites) has been successfully launched and content migration from the legacy platforms is almost completed.
		Development of a draft knowledge management framework to facilitate the management of strategic ECDC knowledge sets.	Postponed	Work on the development of the knowledge management framework has begun but it will mainly take place in 2023.
		Undertake study into the feasibility of an enterprise data catalogue.	Implemented	Study into the feasibility of an enterprise data catalogue completed and presented to the Enterprise Architecture Board.
Strategic objective 2. Support the countries to strengthen their capacities and capabilities to make evidence-based decisions on public health policies and practices				
Area 2.1 Country focus				
Area 2.1 Country focus	2.1.1 Networks interactions	Disease network meetings and public health functions network meetings.	Implemented	STI, Blood-borne viruses and TB: five network meetings, HIV 2x, TB, STI, SoHO, epidemic-prone diseases: four annual meetings: one FWD-Net, one FWD AMR, one EVD- Net, one COVID-19 and influenza joint WHO annual meeting ARHAI: three network meetings (EARS-Net, ESAC-Net and HAI-Net).

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
		Disease network and public health functions network coordination committees meetings.	Implemented	STI, Blood-borne viruses and TB: five disease network and public health functions network coordination committee meetings, HIV, TB, 2x HEP, STI. Epidemic-prone diseases: seven DNCC meetings. three EVD, three FWD and one RVL ARHAI: four DNCC meetings (EARS-Net, ESAC-Net 2x and HAI-Net).
		Other meetings (inter-sectoral meeting(s) with key stakeholders)	Implemented	STI, Blood-borne viruses and TB: Nine meetings with stakeholders. VPI: first EU Immunisation and Vaccine Monitoring Board (IVMAB) meeting in collaboration with EMA. VPI: annual meeting of the EU/EEA NITAG collaboration Epidemic-prone diseases: final 'One Health' European Joint Programme on Foodborne Zoonoses, AMR and Emerging Threats steering committee meeting with EFSA and EEA.
	2.1.2 Country Support	Collection of needs from networks meetings	Implemented	STI, Blood-borne viruses and TB: collected at HIV, TB, HEP, and STI network meetings.
		IT solution with integrated Member States' data in operation.	Implemented	The IT solution was identified during 2022, however full roll-out for all seven areas of the dashboard is to be carried out by mid-2023.
		Country visits, with a focus on after/in-action reviews in related to the COVID-19 response, conducted.	Implemented	Six country visits were undertaken between May and September 2022 to discuss COVID-19 lessons identified at the country level. In addition, ECDC organised an evidence-based decision-making After-Action Review (AAR) in Georgia in September as part of the EU Initiative on Health Security (HSI) project.
	Area 2.2 Prevention and control programmes			
Area 2.2 Prevention and control programmes	2.2.1 Develop scientific advice on communicable disease prevention and control measures.	Other scientific outputs (vaccine effectiveness and impact analyses on COVID-19 and seasonal influenza, vaccine coverage estimates for COVID-19 and influenza).	Implemented	VPI: publications of VEBIS outputs (analysis of data and protocols). Epidemic-prone diseases: a large number of technical and scientific outputs.
		Training materials (in the field of vaccine hesitancy, training curriculum targeting healthcare professionals on communications with hesitant members of the public).	Implemented	VPI-PHF: training materials for trainers in the field of vaccine acceptance, training piloted in Romania in December 2022.
		Reporting on WGS framework for invasive meningococcal disease.	Implemented	VPI: expert meeting held at ECDC and report finalised.
		Expert opinions	Implemented	SBT: two expert opinions

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
		Public health guidance on prevention of infections in PWID (jointly with EMCDDA)	Delayed	SBT: delayed due to reduced staff at ECDC and EMCDDA
		Technical reports (e.g. core EU vaccination schedule; piloted case studies on vaccination coverage)	Implemented	SBT: seven technical reports. VPI: technical reports on core EU vaccination schedule and piloted case studies on vaccination coverage were not published. Postponed to 2023. ARHAI: Health burden of infections with antibiotic-resistant bacteria in the EU/EEA, 2016-2020. Epidemic-prone diseases: a large number of technical and scientific guidance documents (e.g. mpox).
		Systematic reviews;	Implemented	SBT: one systematic review Epidemic-prone diseases: one COVID-19-related literature review. two were cancelled due to unsuccessful tenders. VPI: two systematic reviews cancelled due to unsuccessful tenders and lack of human resources. (Updated systematic review of effectiveness and safety for newer and enhanced influenza vaccines and systematic review on the protection conferred by live attenuated influenza vaccine.
		Scoping reviews (literature review of available influenza antiviral treatment options)	Not reported	
	2.2.2 Strengthen whole genome sequencing and RT-PCR capacity in the EU/EEA.	National WGS and/or RT-PCR infrastructure support projects finalised.	Implemented	
		Framework contract for WGS and RT-PCR cross-border capacity-building activities initiated.	Partially implemented	Framework contract signed; implementation, not started until January 2023.
	2.2.3 Assessment of the main prevention needs in Member States for a future roadmap of joint activities.	Initiation of the assessment of prevention needs in Member States.	Postponed	
Area 2.3 Training				
Area 2.3 Training	2.3.1 Improvements to the Fellowship Programme, based on the results of the external evaluation 2019.	Based on the recommendations from the 2018/2019 external evaluation of the Fellowship Programme, ECDC will start implementing the roadmap for an improved programme. With the launch of the call for applications for Cohort 2022, the first changes will be incorporated into the Administrative Decision (AD). Curricular updates will be reflected	Implemented	Simplified cost options have begun being implemented in new grants (Fellowship Partnership Agreements) for nine fellows from seven public health institutes. Working groups of NFPT/TSF have progressed in areas of curriculum, international assignments, under-

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
		in AD issued in 2022 for Cohort 2023. Administrative changes will be progressively implemented, starting with Cohort 2022.		representation of Member States, quality and selection.
	2.3.2 Offer Continuous Professional Development (CPD) that responds to the needs identified by the ECDC networks, and provide tools and support for the transfer of knowledge at European, national and sub-national levels, with special attention to COVID-19 related needs.	CPD offer is further developed, and reflects the new needs identified, targeting professionals in the CCB networks and supervisors of the ECDC Fellowship Programme.	Implemented	In total, 15 instructor-led courses and webinars and five new e-learning courses were developed, one was updated.
		Offer presented in annual catalogue and delivered, including rapid risk assessments, whole genome sequencing (WGS), vaccine preventable diseases, preparedness and e-health.	Implemented	The catalogue is published in EVA and a version has also been published on the ECDC webpage.
		Two key 'training to trainers' modules on emergency preparedness delivered with participation of at least ten Member States.	Partially implemented	Winter workshop on recovery was implemented, an e-learning course on introduction of preparedness and a preparedness one-stop-shop of ECDC training resources in EVA under the preparedness portfolio.
	2.3.3 Keep continuous quality improvement activities, accreditation and evaluation as an essential part of ECDC training programmes and activities.	Accreditation of ECDC Fellowship programme explored, and steps for its achievement initiated (e.g. contacts with universities and accrediting bodies established for partnerships and/or applications).	Postponed	Academic accreditation or by TEPHINET has not been further investigated with TSF/NFPT, apart from punctual input. Steps to initiate accreditation not yet initiated.
	2.3.4 Maintain the ECDC Virtual Academy (EVA) as a learning system that includes training materials, and administration of all ECDC training courses (face-to-face, online etc.) for the different training programmes and activities.	Interactive catalogue of all CPD activities for 2022 available in EVA	Implemented	The Virtual Academy has been updated to progressively provide a more user-friendly interface.
	2.3.5 Identify country capacity gaps and training needs through the triennial assessment surveys (CCBs and NFPT), to tailor trainings and reduce inequalities in capacity across Europe.	Survey conducted, following the recommendation from the Internal Audit Service (IAS) of the European Commission;	Implemented	Results published on ECDC website.
		Tools for ECDC annual network meetings available, and their use promoted.	Partially implemented	Analysis of existing tools for training needs assessment conducted by external expert and shared with NFPT. Pending: approach to training prioritisation (with NFPT).
Area 2.4 Emergency preparedness				
Area 2.4 Emergency preparedness	2.4.1 Provide technical support in the three phases of the preparedness and response cycle:	After action reviews	Implemented	Four COVID-19 related After Action Reviews conducted.
		Case studies Public Health Emergency Preparedness and response (PHEP) plans	Implemented	One case study conducted, and one self-led simulation exercise training package developed.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	anticipation, response, recovery	assessment, including simulation exercises		
		Literature reviews	Implemented	Three reviews conducted
		Expert meetings on emerging topics	Implemented	Expert consultation on non-pharmaceutical interventions conducted.
		Elaboration of outbreak investigation protocols and tools (depending on the epidemiological situation).	Implemented	Response support and country follow-up provided in relation to specific events
		Field deployments upon requests from the Member States, the European Commission (DG ECHO, DG SANTE) and GOARN (including collaboration agreement with DG ECHO).	Implemented	Nine deployments in support of DG ECHO (in Poland and Uganda), three deployments in support of GOARN (in Poland and Romania) and one in support of WHO (in Poland).
		Use of ECDC tools – risk ranking, HEPsA, EWRS for capacity and capability building (including e-learning).	Implemented	Tools used for different preparedness activities; the protocol for COVID-19 After Action Reviews was used for four reviews.
		EWRS properly functioning and further improved according to the needs of the Commission and the Member States.	Implemented	EWRS maintained and future development needs discussed and agreed with the European Commission.
	2.4.2 Produce and disseminate rapid risk assessments	Rapid risk assessments and joint ECDC-EFSA public health risk assessments (rapid outbreak assessments), including joint notification summaries.	Implemented	Published on ECDC website.
		Response related rosters functional	Implemented	
	2.4.3 Maintain and network for the EOC and Public Health Event (PHE) tools	PHE training internal and external	Implemented	
		EOC equipment upgraded	Implemented	
		Organisation of an international EOC meeting.	Postponed	
	2.4.4 Maintain and update the response measures database of Non-Pharmaceutical Interventions (NPIs) for COVID-19.	Information in the database is updated according to the agreed quality standards.	Implemented	
		Database maintained until the end of August 2022.	Implemented	Database was closed on 30 September 2022.
Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
Strategic Objective 3: Future outlook: Prepare for the future through foresight and innovation assessments				
Area 3.1 Foresight				
Area 3.1 Foresight	3.1.1 Prediction modelling for priority public health infectious diseases foresight programme initiated.	Models developed for VPD and AMR drivers	Partially implemented	Mega-trends and micro-drivers defined, and scenarios developed for all infectious diseases for review in multidisciplinary workshop in Q1 2023.
	3.1.2 Expert consultation on threat scenario development and mitigating policy options.	Meeting report	Partially implemented	Mega-trends and micro-drivers defined, scenarios developed for all infectious diseases for review at multidisciplinary workshop in Q1 2023.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
Area 3.2 Engage				
Area 3.2 Engage	3.2.1 Identify and communicate research priorities relevant to the prevention and control of infectious disease.	Report	Implemented	Report delivered to Advisory Forum and European Commission (DG SANTE and DG RTD)
	3.2.2 Contribute to EU joint actions and EU research projects.	ECDC contributions to ongoing projects, including expert advice, data, and technical support (subject to resource availability and concordance with ECDC mandate)	Implemented	
	3.2.3 Collaborate with other EU Agencies, through the EU Agency Network on Scientific Advice (EU-ANSA) for identification and communication of needs for research in areas of mutual interest; innovative approaches to addressing issues of mutual interest through scientific collaboration and sharing of expertise in research clusters.	Report to Advisory Forum on collaborative initiatives	Implemented	Collaboration on production of paper on inter-agency scientific cooperation during emergencies. Coordination of EU-ANSA scientific seminar series. Ongoing collaboration on scientific quality and scientific impact assessment.
Area 3.3 Support transformation				
Area 3.3 Support transformation	3.3.1 Assess the results of the SARI surveillance partially based on electronic health records.	Expansion of eHealth programme to more countries and more diseases.	Implemented	
	3.3.2 Modernise and integrate EU/EEA surveillance platforms.	EpiPulse includes the new TESSy	Postponed	Technical challenges/lack of staff.
		Smooth and timely Atlas update and AER production.	Partially implemented	Partly deprioritised due to public health emergencies
	3.3.3 Implement the molecular surveillance strategic framework	Ongoing molecular typing surveillance for all diseases planned for implementation in 2022	Partially implemented	Some delays due to extensive disease programmes and microbiology resources devoted to COVID-19.
	3.3.4 Automate epidemic intelligence processes.	Tool for detecting and monitoring events from different sources.	Implemented	
		Tool to automate threat description	Implemented	
Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
Strategic objective 4. Increase the health security in the EU through strengthened cooperation and coordination between ECDC and partners in non-EU countries				
Area 4.1 Neighbourhood				
Area 4.1 Neighbourhood	4.1.1 Gradually integrate the Western Balkans and Türkiye into ECDC systems and networks via enhanced technical cooperation and support their preparations for participation in ECDC activities and advancement with a 'One-Health' approach against AMR.	ECDC pre-accession assistance activities to prepare the Western Balkans and Türkiye for their participation in ECDC.	Implemented	
		Technical cooperation activities initiated for the 'One-Health' approach against AMR.	Implemented	

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	4.1.2 Support the progressive integration of ENP partner countries into ECDC activities and enhance health security by improving public health system capacities and capabilities, including training through the continuation of MediPIET to respond to health threats related to communicable diseases and enhancing regional cooperation.	Development and implementation of work plan to deliver epidemic intelligence, risk assessment, preparedness and response capacity building activities	Implemented	
		Application of framework and criteria for integration of ENP partner countries into ECDC systems and networks.	Cancelled	Based on discussions with ENP partner countries and internally, ECDC has developed a novel approach to integration into ECDC work that will be implemented through an exchange of experts programme.
	4.1.3 Following the request from European Commission, continue assessment of partner non-EU countries and follow-up the assessment of the Western Balkans and Türkiye and ENP partner countries.	Technical assessment reports and initiation of national post-assessment action plans.	No requests from the Commission received	
	4.1.4 Manage MediPIET, under ECDC action for strengthening health security in EU neighbourhood, financed by the European Commission.	Fourth cohort of MediPIET, selected and training started, with on-the-job projects and modules implemented.	Implemented	Graduation of forth cohort planned for November 2023.
		Annual meeting of steering committee.	Implemented	
Area 4.4 Major CDCs				
Area 4.2 Major CDCs	4.2.1 Assessment of bilateral cooperation arrangements with CDCs – establishments of new partnerships and possibilities for further improvement in crisis situations.	Regular exchange of information and practices, face- to-face or through teleconferences.	Implemented	
		Cooperation with CDCs with which ECDC has formal bilateral arrangements (MoU, administrative arrangements) evaluated.	Implemented	
		Joint action plans associated with the MoUs developed.	Implemented	JAP with China CDC developed, JAP with US CDC under discussion.
		Possibilities to establish processes and procedures for the rapid exchange of information in outbreak situations explored and taken forward.	Delayed	First part is implemented – processes and procedures explored but specific actions to take this forward will not be carried out until 2023.
	4.2.2 Evaluation of cooperation in the network of major CDCs – consolidation and further expansion of the network.	Regular exchange of information and practices through face- to-face meetings or teleconferences.	Implemented	
		Assessment initiated on added value of multilateral collaboration among major CDCs.	Implemented	
		Consolidation and further expansion of the network to other CDCs explored;	Implemented	
		Good practices/control options in outbreak situations or approaches to the prevention and control of infectious diseases threats identified.	Implemented	

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	4.2.3 Initiate the implementation of a technical partnership project 'ECDC4Africa CDC' to contribute to health security in Africa by sharing EU practices and strengthening Africa CDC capacities in preparedness, surveillance, and response to health threats.	Agreed cooperation framework between ECDC and Africa CDC for implementation of technical partnership over defined period of time.	Implemented	Inception phase completed, workplan of activities for 2022-2024 approved by 3rd Project Steering Committee and being implemented. All ECDC project staff now hired.
Area 4.3 Coordination				
Area 4.3 Coordination	4.3.1 Nurture the collaboration and coordination with the EU institutions and bodies, particularly the European Commission (DG SANTE, DG ECHO, DG NEAR, the Directorate-General for International Cooperation and Development (DG DEVCO)) and the European External Action Service (EEAS) and other EU agencies, in particular the European Food Safety Authority (EFSA) and the European Medicines Agency (EMA).	Enhanced channels of close collaboration for effective coordination and interaction with the European Commission, the EEAS, the European Parliament and the Council Secretariat	Implemented	
		Identification of potential areas of collaboration and joint work with other EU Agencies.	Implemented	For example, the joint WGS system was opened between ECDC and EFSA in July. The European Vaccine Monitoring Platform (VMP) was set up jointly with EMA to assess the impact and effectiveness of COVID-19 brand-specific vaccines. In addition, ECDC collaborates with EMA, EMCDDA, EEA, ECHA and other EU agencies bilaterally and within the EU Agencies Network (EUAN).
	4.3.2 Invest in maintaining appropriate relationships with the European Parliament, in particular with the Committee for the Environment, Public Health and Food Safety (ENVI).	ECDC Director's annual exchange of views with the ENVI Committee and hearings before Parliamentary Committees upon request;	Implemented	
		Provision of scientific opinions, as requested by European Parliament.	Implemented	
		Information on ECDC activities and of the Centre's disease specific areas in a format useful for making decisions.	Implemented	This is the ongoing aim of ECDC's Director and experts in their regular exchanges with the European Parliament and in particular with the ENVI Committee.
	4.3.3 Enhance further collaboration with WHO to ensure complementarity of actions and avoid duplication of efforts.	Reviewed set of processes for joint activities under the bilateral administrative arrangements and the publications agreement.	Partially implemented	Both will be finalised and signed in 2023.
Strategic objective 5. Transform the organisation to the next generation ECDC				
Area 5.1 Integrated Management Framework				
Area 5.1 Integrated management framework	5.1.1 Ensure continued implementation of the integrated management framework and alignment with the new ECDC mandate.	ECDC Strategy and the Strategy Implementation Roadmap updated in line with the ECDC new mandate.	Postponed	Amended legal text in force since 26 December 2022.
		The integrated management framework reviewed.	Implemented	

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	5.1.2 Strengthen internal processes for creating, capturing, sharing, and leveraging internal ECDC knowledge.	Plan developed on practices to be introduced in view of ECDC becoming a learning and innovative organisation.	Implemented	
	5.1.3 Ensure continued implementation of the roadmap for the IT Integrated Steering and Support Systems (IceCube).	Concept developed and initial set up of the Monitoring Data Warehouse.	Partially implemented	
		Implementation of ECDC planning and monitoring system initiated.	Implemented	
		List of prioritised ECDC e-workflows established.	Postponed	
		Process management tool selected	Implemented	
		ECDC planning and monitoring system selected.	Implemented	
	5.1.4 Initiate implementation of the ISO 9001-based quality management system at ECDC	ECDC instructional documents adapted to the new approach	Partially implemented	
		Evaluations carried out	Cancelled	
		Approach for the implementation of the ISO 9001 quality management system developed.	Implemented	
		Process landscape updated to reflect the ECDC new mandate	Postponed	Amended legal text in force since 26 December 2022
		Stakeholder survey carried out and an action plan prepared.	Partially implemented	
	5.1.5 Enhance continued planning and reporting on ECDC annual work programmes.	Coordination actions supporting project management across ECDC carried out	Implemented	
		Integrated work plan monitoring process implemented.	Implemented	
		List of the core ECDC outputs updated to reflect the ECDC new mandate	Postponed	Amended legal text in force since 26 December 2022
		Planning, monitoring, and reporting on ECDC work programmes implemented	Implemented	
		Project office roles and responsibilities reinforced	Partially implemented	
	5.1.6 Enhance the system of Key Performance Indicators (KPIs) to improve monitoring of ECDC performance and achievement of strategic objectives.	KPI management process established.	Postponed	Amended legal text in force since 26 December 2022.
Matrix of strategic and SPD KPIs developed.		Implemented		
5.1.7 Ensure continued coordination of the ECDC internal control and audit activities.	Audit coordination and follow-up of audit observations implemented.	Implemented		
	Internal control coordination and the internal control framework activities implemented.	Implemented		
Area 5.2 Engaged staff				
Area 5.2 Engaged staff	5.2.1 Transform human resources management and provide effective and efficient human resources services	Management training and targeted management coaching to support development of the management concept through objectives.	Implemented	Coaching was provided to managers, as well as retreats for teams.
		Stress prevention programme – further activities to build up staff resilience as part of Next Generation ECDC (linked to new strategy).	Postponed	The procurement of stress prevention activities was postponed due to other priorities and will take place in 2023

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
		Timely adoption of new implementing rules.	Implemented	During 2022, implementing rules were adopted on working time and hybrid working, and on administrative inquiries.
		Skills gap analysis in support of the ECDC Strategy 2021–2027, with specific focus on expert competencies finalised (to be used for recruitment and training plans).	Partially implemented	The ECDC Future Competencies project was completed (library of competencies for administration, governance and IT.) In 2023, the project will be finalised with the compilation of a library of competencies for staff in the operational areas.
		The new induction programme for newcomers 'Welcome to ECDC' is fully deployed.	Implemented	The induction programme has been deployed and is now accessible to all staff members at ECDC (not only newcomers).
Area 5.3 Stakeholders and external communication				
Area 5.3 Stakeholders and external communication	5.3.1 Develop and implement the assessment phase of the public relations plan	Brand audit	Postponed	Contract not in place in time for implementation in 2022.
		Target audience analysis update		
		Media mapping		
		Strategic public relations plan		
	5.3.2 Ensure continued support and coordination of the ECDC governance bodies.	Coordination of the Director Consultation Group (DCG)	Implemented	
		Governance of the Stakeholders Relationship Management system	Implemented	
		Liaison with and actions to improve cooperation with members of the Management Board, Advisory Forum, and Coordinating Competent Bodies.	Implemented	
		Support and coordination of the work of the Management Board (MB), Advisory Forum (AF), and Coordinating Competent Bodies (CCBs).	Implemented	
	5.3.3 Improve and further develop ECDC online presence, ensuring that the content on its websites is audience-driven and helps to improve the transparency, visibility and availability of ECDC outputs.	Improved ECDC websites	Implemented	
	5.3.4 Implement the first phase of the Stakeholder Engagement Framework	Analysis of the current stakeholder landscape and gaps.	Postponed	Contract not in place in time for implementation in 2022.
		Updated stakeholder mapping.		
		Outreach to selected communication stakeholders.		
	5.3.5 Further enhance ECDC's social media presence and engagement.	Enhanced social media presence, activities and engagement.	Implemented	
		Increase ECDC brand knowledge, familiarity and reliability.	Implemented	
		Production of multimedia content.	Implemented	
	5.3.6 Disease-specific communication activities	Integrated communication campaigns.	Implemented	

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	implemented throughout the year, following internationally recognised awareness days, ECDC priorities and stakeholder priorities.	Shared content with the National Focal Points for Communication and other stakeholders at EU level.	Implemented	
		Information stands.	Cancelled	
		Digital events.	Implemented	
	5.3.7 Enhanced internal communication activities, including the delivery of a new Information Centre	Information Centre and analytics.	Implemented	
		Internal communication news items.	Implemented	
		Internal communication activities.	Implemented	
	5.3.8 Maintain and enhance cooperation with key stakeholders at EU-level, including relations with our host country.	Session organised by ECDC at the European Health Forum, Gastein 2022.	Implemented	
		Liaison and actions as per the agreement on strategic co-operation between ECDC and the Swedish Government, including sharing of experiences, and expertise with the Swedish authorities.	Implemented	
	5.3.9 Continued engagement with media outlets across the EU.	Answers to 100% of requests received through the press inbox.	Implemented	
		Daily, quarterly and annual media monitoring reports.	Implemented	
		Topic-specific media monitoring reports.	Implemented	
Support Services				
Area 6.1 Digital Transformation Services				
Area 6.1 Digital Transformation Services	6.1.1 ECDC supports public health by providing digital solutions for the Commission, Member States and other stakeholders. The Centre's operations are enabled with the necessary digital solutions to steer and support the Next Generation ECDC.	Ensured IT services, basic IT product maintenance and continuous service improvement.	Implemented	
		New IT solutions and further development of IT products.	Implemented	Multiple releases of IT products. Major developments: new PHE duty schedule; machine translation on ECDC website; new versions of e-workflows; Chrono upgrade; Stakeholder Relationship Management release and Enterprise Content Management Platform (ECMP) nominations in the cloud; ECMP release; CDTR in EpiPulse; improvements to public health dashboards.
		High-quality IT, project management, enterprise architecture and IT security services are provided.	Implemented	Many new instructional documents were produced in 2022, such as work instructions on software testing, IP on user acceptance testing, policy on cybersecurity, information security policy, etc.
	6.1.2 ECDC provides its staff with a digital workplace that addresses	Implement recommendation of workplace assessment for 'hotdesking'.	Implemented	

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
	the need for mobility, flexibility, communication and collaboration. Users can easily access the IT services they need via the front-office or self-service.	Implement new telephony solution.	Implemented	Physical desk phones have been replaced by MS Teams, which can now be used to place phone calls from the laptop or from a mobile device.
		Implement Enterprise Content Management Platform (including full functionality of MS Teams, encryption of sensitive non-classified data and Sharepoint online.)	Implemented	
		Migration of cloud infrastructure from Cancom to Cloud II framework contract.	Implemented	Migration to CLOUD II finalised in March 2022.
		Migration of containers from on-premises to cloud.	Partially implemented	The plan has been revised to optimise the use of previous capital expenditure investments (i.e. the on-premises data centre). ECDC will continue using existing equipment for as long as possible before moving workloads to the cloud. However, ECDC will gradually make applications available in the cloud to increase the scope of its disaster recovery solution. This will simplify the permanent move later on.
		Implement an Information Security Management System.	Implemented	Despite resource challenges, the Information Security Management System project for 2022 was delivered according to plan. Project will be closed at the beginning of 2023. Regular reviews and continuous improvements will subsequently be made to the ISMS.
		Implement recommendation for feasibility study on identity and access management.	Partially implemented.	Ongoing market study to select vendor for the new IAM solution. Expected to be concluded in April 2023.
	6.1.3 Prepare ECDC for the future through technology foresight and innovation.	Review of DTS Target Operating Model.	Implemented	The evaluation of Target Operating Model 2021 was concluded in March 22. The document was used as basis for the tender specifications for the new framework contract.
		Launch of tender procedure for next generation outsourcing framework contracts.	Implemented	Open tender launched in July 2022, with deadline Oct. Award decision published in Dec, framework contracts signed Feb 2023.
		Assess feasibility of adopting a new technical platform for e-workflows and low code solutions.	Implemented	Studies on rapid application development feasibility and ServiceNow applicability to e-workflows have been produced.
	Area 6.2 Resource Management			
Area 6.2 Resource management	6.2.1 Provide effective and efficient procurement services	Number of negotiated procedures/direct contracts reduced.	Postponed	Due to competing work priorities, ECDC was unable to perform an assessment of how and where to reduce procedures.
		Number of new procurement procedures added to the procurement plan reduced.	Postponed	The organisation's planning process is being reviewed and

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
				a new planning tool is being prepared.
		Continued implementation of procurement e-workflows.	Partially implemented	During 2022, e-workflows have been implemented. for review by the Committee on procurement, contracts and grants (CPCG) and contract amendment.
		Basic procurement training made available to all newcomers at ECDC.	Implemented	The Basic Procurement training has been made into an online training course and is now available for all newcomers.
	6.2.2 Provide effective and efficient legal services	Legal intranet page with key information available.	Partially implemented	An intranet page is now available for the Independence Policy. An intranet page is being developed for the Legal Section.
		Update existing Memoranda of Understanding (MoU) with other agencies to regulate areas of cooperation.	Partially implemented	The collaboration agreement with EMA on the European Vaccination Information Portal and the collaboration agreement with EFSA on molecular typing were concluded in 2022. An annex to the working arrangement with EMA for the Vaccines Monitoring Platform is being developed. A cooperation agreement with EASA is in the final stages of negotiation.
		Full compliance and establishment of routines for the implementation of the new Independence Policy for staff.	Partially implemented	Discussions are underway on the adoption of a decision relating to staff that need to submit an annual DoI. DoIs are collected from all new staff and assessed before they are offered a position.
		Development of an effective ex-post control strategy for the application of the Independence Policy and the Data Protection Regulation.	Partially implemented	Data Protection: data protection records were reviewed to ensure that their content reflects the actual reality of the respective processing operations in the RMS Unit. Ex-post checks of meeting participants were carried out.
	6.2.3 Provide effective and efficient Corporate services	Start the implementation of the corporate services strategy that aligns the Corporate Services Section structure and framework of services with ECDC's long-term plan for enhancing efficiency and effectiveness.	Implemented	Facilities Management is implementing the corporate services strategy in the Missions and Meetings section, the mailroom and the archives, including an upgrade of IT tools.
		Implement service level agreements for facilities management services.	Partially implemented	The deployment of the ServiceNow platform for facilities management will allow the service level agreements to be implemented and configured.
		Improve participant experience at ECDC events.	Partially implemented	Implementation of the Event Logistic Management (ELM) application is ongoing and is based on the Stakeholder Relationship Management application.

Action area	SPD 2022 objective	SPD 2022 Expected output	Status	Comments
		Reduce ECDC's environmental footprint according to set objectives.	Partially implemented	First seven steps of EMAS to be validated by the Director.
		Continue implementing the ECDC workplace assessment recommendations.	Implemented	Workplace Transformation project approved and launched as part of the ASPIRE programme.
		Increase the digitalisation of mailroom and archives.	Partially implemented	Chrono upgraded and ServiceNow currently being implemented.
	6.2.4 Provide effective and efficient Financial Management services	Consolidation and possible enhancement of the use of electronic payments and commitments in Speedwell.	Implemented	
		Encouraging more suppliers to use e-invoicing.	Implemented	Will become irrelevant when suppliers are contractually obliged to use e-invoicing.
		Enhance the financial reporting, forecasting and monitoring of budget implementation throughout the Centre.	Implemented	Monthly implementation report provided to ECDC management. Automated reports provided to Head of Units. Ad hoc financial reporting provided when requested.
		Consolidate payment process to ensure payment within the time limits of the ECDC Financial Regulation.	Implemented	In total, 98% of ECDC payments are made within the regulatory deadline.

Annex 2. Statistics on financial management

Budget outturn (in EUR)	2020	2021	2022
Revenue actually received (+)	70 708 000	172 749 000	103 385 000
Payments made (-)	47 139 000	109 153 000	75 930 000
Carry-over of appropriations (-)	22 533 000	71 428 000	35 729 000
Cancellation of appropriations carried over (+)	1 155 000	1 025 000	13 837 000
Adjustment for carry-over of assigned revenue appropriations from previous year (+)	1 118 000	9 089 000	12 124 000
Exchange rate differences (+/-)	-238 000	-543 000	179 000
Adjustment for negative balance from previous year (-)			
Total	3 071 000	1 739 000	17 866 000

Descriptive information and justification for:

Budget outturn

First estimate of the 2022 surplus to be reimbursed to the EU budget (as assigned revenue): EUR 17 866 467.32.

The Centre cashed its budget of EUR 99 872 000 in 2022.

The expenditure of 2022, including the carry-forward to 2023, equals EUR 111 659 912.46.

The amount of cancelled unused payment appropriations carried forward from previous year (2021) of EUR 13 837 170.29, the adjustment for carry-over from the previous year of appropriations available on 31 December arising from assigned revenue of EUR 12 124 588.87 and the exchange rate gain for the year 2022 of EUR 179 011.60 have resulted in a positive budget outturn for 2022.

In 2022, ECDC reimbursed a positive budgetary balance from 2021 of EUR 1 739 880.22 to the EU.

As a result of the above, EUR 17 866 467.32 will be reimbursed during 2023 to the EU budget (as assigned revenue) related to the Centre's 2022 budget implementation.

Cancellation of commitment appropriations

The total implementation of commitment appropriations in 2022 reached 98.86%, with a total of EUR 1 136 676.41 cancelled, compared to EUR 1 085 863.33 cancelled in 2021. As a result, the 2% reduction of the EU contribution for the implementation of commitment appropriations is not applicable for ECDC's 2024 budget. In 2022, due to force majeure, several of the HERA grant beneficiaries applied for grant extensions as a result of significantly delayed delivery times caused by global supply chain issues (triggered by the war in the Ukraine and COVID-19 issues which had an impact on production in China). This meant that a substantial part of the C8 funds reserved for this purpose could not be implemented. Due to cancellations of payment appropriations within the HERA Incubator for WGS infrastructure support grant agreements, which were beyond ECDC's control, the Agency cancelled more than 5% of its payment appropriations in 2022. The commitment of appropriations for the operational expenditure on Title 3 reached 98.87% in 2022.

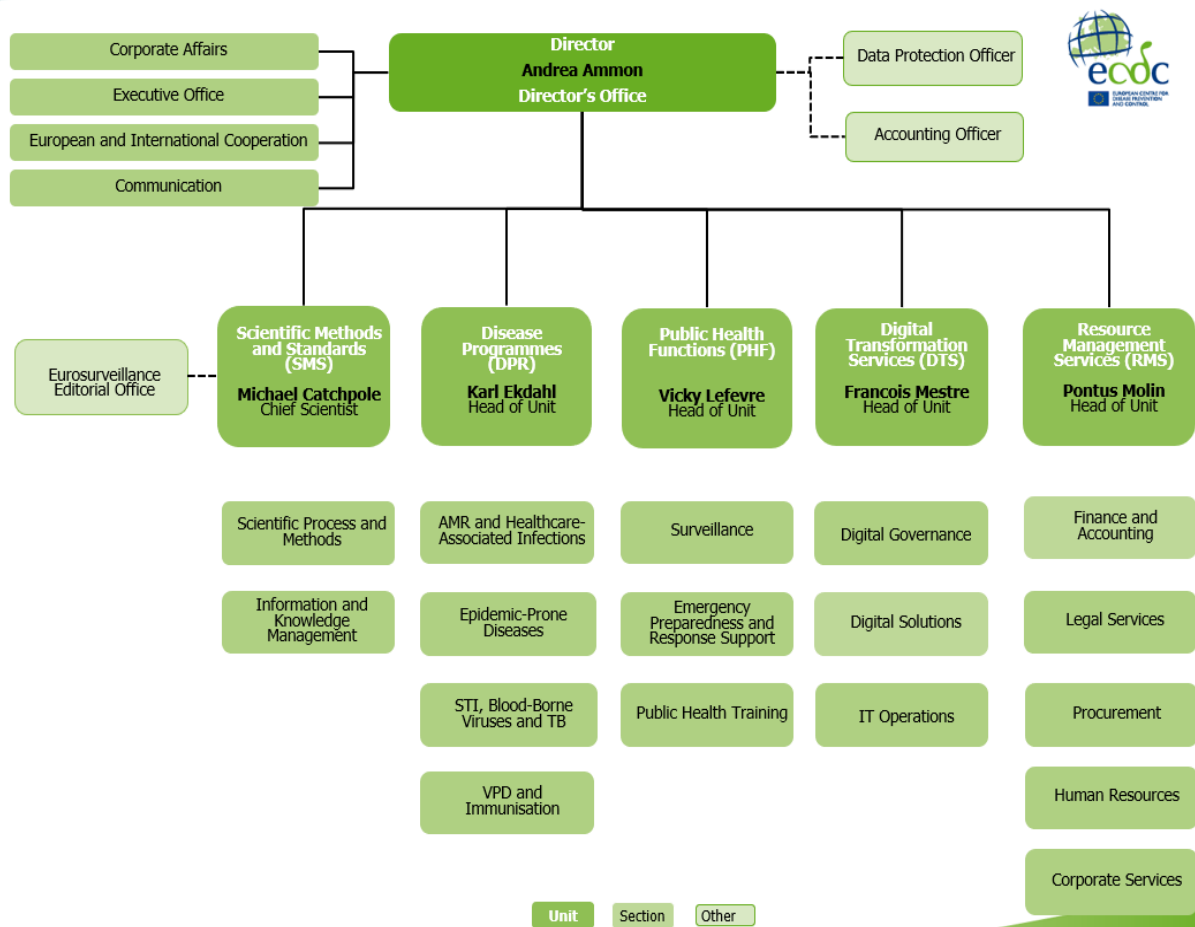
Cancellation of payment appropriations for the year and payment appropriations carried over

The Agency carried forward EUR 59 303 806 from 2021 to 2022, EUR 45 466 636 of which was paid (fund source C8).

This corresponds to 76.67% of the amount carried forward.

If the HERA Incubator WGS grants are excluded from the C8 performance numbers, the rate of execution for 2022 was 95.8%, which is an improvement of 3.4 points on the previous year.

Annex 3. Organisational chart



Annex 4. Establishment plan and additional information on human resources management

ECDC establishment table 2022

Category and grade	Establishment plan in voted EU budget 2022	
	Officials	TA
AD 16		
AD 15		1
AD 14		2
AD 13		3
AD 12		7
AD 11		8
AD 10		25
AD 9		24
AD 8		25
AD 7		29
AD 6		21
AD 5		3
Total AD		148
AST 11		
AST 10		1
AST 9		2
AST 8		3
AST 7		11
AST 6		10
AST 5		15
AST 4		13
AST 3		7
AST 2		
AST 1		
Total AST		62
AST/SC6		
AST/SC5		
AST/SC4		
AST/SC3		5
AST/SC2		
AST/SC1		
Total AST/SC		5
Total		215

Recruitment grade/function group for each type of post - indicative table

Key functions	Type of contract (official, TA or CA)	Function group, grade of recruitment*	Role of the function (i.e. administrative support or operations)
Head of Unit (level 2)	TA	AD 11/ AD 12	Depending on function: operational or administrative
Deputy Head of Unit (level 3)	TA	AD 10	Depending on function: operational or administrative
Head of Section (level 3)	TA	AD 8	Depending on function: operational or administrative/neutral
Principal Expert	TA	AD 8	Operational
Expert	TA	AD 5	Operational
Scientific Officer	CA	FG IV	Operational
Administration (e.g. HR, Procurement/Finance)/IT Officers	TA	AST 4	Depending on function: operational or administrative/neutral
Officers in support functions (e.g. Communication, IT, Legal)	CA	FG IV	Depending on function: operational or administrative/neutral
Assistants/specialists in support functions (e.g. HR, Finance, Procurement, IT)	CA	FG III	Depending on function: operational or administrative/neutral
Administrative assistants	TA	AST/SC 1	Depending on function: operational or administrative
Office assistants	CA	FG II	Depending on function: operational or administrative.

Job screening/benchmarking against previous year's results²⁰

Job type (sub) category	Year N-1 (%)	Year N (%)
Administrative support and coordination	14.5	14.5
Administrative support	13.6	13.5
Coordination	0.9	1.3
Operational	78.4	78.5
Top-level operational coordination	3.3	2.5
Programme management and implementation	66.0	65.5
Evaluation and impact assessment	0.0	0.0
General operational	9.1	10.5
Neutral	7.1	6.6
Finance/control	7.1	6.6
Linguistics	0.0	0.0

²⁰ Table as per Methodology for Agencies job screening (2014)

Implementing rules adopted in 2022

Management Board Decisions on Implementing Rules

None

Annex 5. Human and financial resources by activity

The activity-based costing (ABC) provides an overview of human and financial resources consumed (committed) by activity in 2022. It reflects the structure presented in the Consolidated Annual Activity Report. ECDC staff members record their working time per activity in the human resources system Allegro, reflected in the first column (Total FTE). The column 'Administrative staff' reflects the administrative support for operations, considered as operational work following the benchmarking exercise (see also Annex 4).

Strategic objective / Action Area	Total FTEs	Admin Staff	CA	TA	Title 1	Title 2	Title 3	TOTAL
⊕ 1.0 Management	2.5	0.5	0.2	2.3	496,149	42,989		539,138
⊕ 1.1 Standards	2.7	0.6	1.2	1.5	270,545	46,446		316,991
⊕ 1.2 Evidence	38.8	8.3	10.9	27.8	4,549,718	675,977	24,505,582	29,731,276
⊕ 1.3 Methodologies	6.9	1.5	2.4	4.5	794,117	119,725	483,757	1,397,599
⊕ 1.4 Knowledge transfer	25.4	5.1	11.0	14.4	2,281,906	714,600	1,335,393	4,331,899
⊖ 2. Support the countries to strengthen their capacities	99.6	21.1	29.8	69.9	11,155,525	1,737,771	9,031,972	21,925,267
⊕ 2.0 Management	1.6	0.3	0.1	1.5	317,634	27,521		345,155
⊕ 2.1 Country focus	7.6	1.6	3.3	4.3	864,258	131,767	547,337	1,543,361
⊕ 2.2 Prevention and control programmes	33.8	7.2	9.2	24.6	3,903,443	589,864	4,307,309	8,800,616
⊕ 2.3 Training	19.0	4.1	5.4	13.6	1,788,269	331,710	3,478,699	5,598,678
⊕ 2.4 Emergency preparedness	37.7	7.8	11.8	25.9	4,281,921	656,909	698,627	5,637,457
⊖ 3. Future outlook	14.4	3.0	4.4	10.0	1,808,201	251,953	1,295,025	3,355,178
⊕ 3.0 Management	1.2	0.3	0.1	1.1	245,910	21,307		267,217
⊕ 3.1 Foresight	0.7	0.2	0.0	0.7	101,273	12,520	427,748	541,541
⊕ 3.2 Engage	0.4	0.1	0.0	0.4	66,064	7,705	4,608	78,377
⊕ 3.3 Support transformation	12.1	2.5	4.3	7.8	1,394,954	210,421	862,669	2,468,044
⊖ 4. Increase EU health security through cooperation with	11.3	2.4	3.3	8.0	1,419,936	197,550	41,621	1,659,107
⊕ 4.0 Management	0.6	0.1	0.0	0.5	115,270	9,988		125,258
⊕ 4.1 Neighbourhood	4.9	1.1	1.9	3.0	556,050	86,015		642,065
⊕ 4.2 Major CDCs	3.0	0.6	1.1	1.9	363,238	52,871	9,412	425,521
⊕ 4.3 Coordination	2.8	0.6	0.3	2.5	385,377	48,676	32,209	466,263
⊖ 5. Transform the organisation	16.9	0.0	6.8	10.1	1,767,230	679,936	884,046	3,331,212
⊕ 5.0 Management	1.4	0.0	1.0	0.4	159,990	24,418		184,409
⊕ 5.1 Integrated management framework	1.6	0.0	0.6	1.0	246,132	239,848		485,980
⊕ 5.2 Engaged staff	10.9	0.0	3.5	7.5	1,064,715	240,249		1,304,964
⊕ 5.3 Stakeholders and external communication	3.0	0.0	1.8	1.2	296,392	175,421	884,046	1,355,859
⊖ 6. Support services	16.4	0.0	5.1	11.3	1,508,725	1,707,815	11,276,785	14,493,325
⊕ 6.0 Management	0.6	0.0	0.0	0.6	118,057	10,465		128,522
⊕ 6.1 Digital Transformation Services	7.4	0.0	2.7	4.7	800,516	1,284,862	11,276,785	13,362,163
⊕ 6.2 Resource management	8.4	0.0	2.5	6.0	590,151	412,488		1,002,640
⊖ 8. Generic actions	35.1	7.2	8.8	26.4	4,022,181	612,505		4,634,686
⊕ 0.0 Generic actions not related to core work	35.1	7.2	8.8	26.4	4,022,181	612,505		4,634,686
⊖ 9. Benchmarking	23.2	0.0	12.5	10.6	2,231,016	404,071		2,635,087
⊕ 9.0 Neutral category as per Benchmarking Methodol	23.2	0.0	12.5	10.6	2,231,016	404,071		2,635,087
Grand Total	293.1	49.7	96.4	196.8	32,305,248	7,191,336	48,854,181	88,350,765
Time not worked or not reported*	56.9				9,392,846	991,712	0	10,384,558
Total	350.0				41,698,093	8,183,048	48,854,181	98,735,323

*This line reflects time underreported by staff, sick leave, medical part-time, part-time work and parental leave.

Annex 6. Contribution, grant and service-level agreements

Financial framework partnership agreements

	General information					Financial and HR impacts		
	Actual or expected date of signature	Total amount	Duration	Counterpart	Short description		N-1 (2021)	N (2022)
Grant agreements								
1. ERLTB-Net	Framework partnership agreement signed in 2022.	EUR 200 000 per year	Four years	Consortium led by Ospedale San Raffaele	Implementation of lab coordination activities, including lab network coordination, EQA, training, strain collection, typing, scientific advice and technical guidance on lab issues, methods harmonisation and network meeting.	Amount	EUR 199 981	EUR 199 969
						No. FTEs	0.20	0.25
						No. SNEs		
2. Scientific coordination of ECDC Fellowship Programme	Framework partnership agreements signed in 2020.	EUR 575 000 per year	Four years	A total of 16 specific agreements with different public health institutes over the period of two years.	Scientific coordination of ECDC Fellowship Programme (Epidemiology (EPIET) and Public Health Microbiology (EUPHEM) paths). To ensure the availability of highly-qualified scientific coordinators for the Fellowship programme.	Amount	EUR 233 909	EUR 304 395
						No. FTEs	2.41	1.9
						No. SNEs		
3. ECDC Fellowship Programme: hosting of fellows.	Framework partnership agreements signed in 2019, 2020 and 2021.	EUR 1 950 000 per year	Four years	A total of 39 specific agreements (for hosting cohorts 2020, 2021 and 2022) with different public health institutes.	ECDC Fellowship Programme (Epidemiology (EPIET) and Public Health Microbiology (EUPHEM) paths) hosting of fellows at training sites.	Amount	EUR 1 675 984	EUR 2 086 829
						No. FTEs	1.16	0.95
						No. SNEs		
4. Action grants for enhancing WGS and/or RT-PCR national infrastructures and capacities to respond to the COVID-19 pandemic in the EU and EEA.	Direct grant agreements, action grants without a call for proposal.	EUR 77 087 704 for 2021	One year	In all, 24 grants to national public health authorities from EU and EEA Member States.	Supporting activities via the award of grants for action that directly leads to enhanced and/or improved national public health WGS and RT-PCR capacity.	Amount	EUR 77 087 704	EUR 1 982 938.2
						No. FTEs	3	0.5
						No. SNEs		
Total grant agreements						Amount	EUR 79 197 566	EUR 4 574 721.2
						Nr of FTEs	6.77	3.6

	General information					Financial and HR impacts	
	Actual or expected date of signature	Total amount	Duration	Short description		N-1 (2021)	N (2022)
Contribution agreements							
IPA6 contribution agreement	10 December 2019	EUR 2 500 000	Five years	Preparatory measures for the participation of the Western Balkan countries and Turkey in ECDC’s work, with special focus on ‘One Health’ against AMR and enhanced SARI surveillance, 2020-2024.	Amount	EUR 583 467	EUR 720 449
					No. FTEs	0.52	2
					No. SNEs		
ECDC4Africa CDC contribution agreement	19 October 2020	EUR 9 000 000	Four years	The ‘ECDC for Africa CDC’ action aims to: - strengthen capacities of Africa CDC in preparedness, risk assessment, rapid response, and emergency operations; - improve continental harmonised indicator- and event-based surveillance of infectious diseases, including platforms for data sharing and early detection of threats as well as foundations for sustainable trained public health workforce.	Amount	EUR 242 644	EUR 680 170.72
					No. FTEs	3.31	8.12
					No. SNEs		
EU Initiative on Health Security contribution agreement	18 December 2020	EUR 9 000 000	Four years	The EU Initiative on Health Security aims to set up a competent regional workforce for the prevention and control of challenges posed by communicable diseases and to enhance regional cooperation to tackle cross-border health security threats in EU candidate and potential candidates (EU Enlargement) countries and European Neighbourhood Policy (ENP) partner countries.	Amount	EUR 1 227 699	EUR 2 319 462.92
					No. FTEs	3.52	15.29
					No. SNEs		
Reinforcement of EVIP through EU4Health contribution agreement	Q4 2022	EUR 1 000 000	30 months	Reinforcement of the European Vaccination Information Portal (EVIP) through continuous and dynamic updates of the website, including new vaccine developments, links to reliable sources, content development and translation, as well as paid promotion of EVIP.	Amount		0 EUR
					No. FTEs		0
					No. SNEs		
Total contribution agreements					Amount	EUR 2 053 810	EUR 4 303 550
					No. FTEs	7.35	25.41
Service-Level Agreements							
None					Amount		
					No. FTEs		
					No. SNEs		
Total service-level agreements					Amount		
					No. FTEs		
					Nr of SNEs		

Annex 7. Environment management

ECDC measures to ensure cost-effective and environment-friendly working place

ECDC's premises have been environmentally certified as a 'green building' since 2018. In December 2020, the building received the environmental certification 'BREEAM Very Good'. The Building Research Establishment Environmental Assessment Method (BREEAM) is the world's leading sustainability assessment method for master planning projects, infrastructure and buildings.

ECDC is also implementing the EU Eco-Management and Audit Scheme (EMAS). The implementation of EMAS began in October 2019, when ECDC performed its first environmental assessment. The environmental assessment established that the main sources of CO₂ emissions for ECDC were trips related to missions and meetings, and for the purposes of recruitment and training courses. In 2022, ECDC completed the first seven steps of EMAS implementation by developing its first environmental management system. It will now initiate the certification process for official EMAS registration.

Measures to reduce the environmental impact of ECDC's operations

All of ECDC's electricity comes from hydro-power. ECDC's premises are equipped with energy-efficient glass windows, optimising daylight admission and reducing solar heat. Light sources are mostly LED, with occupancy sensors and daylight control systems. In 2021, ECDC introduced touchless taps, helping to reduce up to 70% of water consumption.

ECDC continues to improve its recycling system, with waste separation for paper, plastic, glass, organic, metal, e-waste, toners, lights and bulbs, batteries, corrugated cardboard and boxes. In addition, ECDC has requested information on environmental sustainability from some of its suppliers and purchases eco-labelled products (such as stationery and cleaning detergents).

To reduce the environmental impact of transport, ECDC encourages its staff to commute to work sustainably by providing facilities for bicycles and having very good public transport connections. Videoconferencing is also encouraged to limit the environmental impact of missions. In 2022, ECDC introduced new sustainable travel guidelines to reduce carbon emissions and the overall number of trips by focusing on business-critical travel and, where travel is necessary, ensuring that the most environmentally friendly travel options are chosen.

ECDC environmental objectives

As an agency of the European Union, ECDC recognises its responsibility towards the environment and the importance of implementing measures to control and lower the environmental impact of its operations. In 2022, the Agency continued its efforts towards greater environmental sustainability, focusing on selected areas for continuous improvement.

Annex 8. Final annual accounts 2022

See final annual accounts 2022 and report on budget and financial management 2022 for the European Centre for Disease Prevention and Control (Management Board document MB57/06).

For details, see: <https://ecdc.europa.eu/en/about-usour-key-documents/financial-documents>.

Annex 9. ECDC Management Board/Advisory Forum/Coordinating Competent Bodies

Members and Alternates of ECDC Management Board

Country	Name	Member/Alternate
Austria	Dr Sigrid Kiermayr	Member
	Nomination pending	Alternate
Belgium	Mr Lieven De Raedt	Member
	Dr Dirk Wildemeersch ²¹	Alternate
Bulgaria	Dr Angel Kunchev	Member
	Ms Nataliya Spiridonova	Alternate
Croatia	Dr Bernard Kaić	Member
	Assistant Professor Krunoslav Capak	Alternate
Cyprus	Dr Irene Cotter	Member
	Ms Maroussa Konnari Jeronymides	Alternate
Czechia	Dr Pavla Svrčinová ²²	Member
	Mr Matyáš Fošum ²³	Alternate
Denmark	Ms Helene Bilsted Probst ²⁴	Member
	Ms Line Raahauge Hvass ²⁵	Alternate
Estonia	Ms Heli Laarmann	Member
	Nomination pending	Alternate
Finland	Dr Anni-Riitta Virolainen-Julkunen	Member
	Dr Taneli Puimalainen	Alternate
France	Professor Geneviève Chêne	Member
	Ms Anne-Catherine Viso	Alternate
Germany	Dr Ute Teichert ²⁶	Member
	Dr Gesa Lücking	Alternate
Greece	Professor Theoklis Zaoutis	Member
	Mr Georgios Anastopoulos ²⁷	Alternate
Hungary	Ms Ágnes Dánielisz	Member
	Ms Krisztina Biró	Alternate
Ireland	Dr Colette Bonner	Member
	Mr Daniel Shine	Alternate
Italy	Dr Francesco Maraglino	Member
	Dr Sandro Bonfigli	Alternate
Latvia	Ms Jana Feldmane	Member
	Professor Dzintars Mozgis	Alternate
Lithuania	Dr Audrius Ščeponavičius	Member
	Dr Loreta Ašoklienė ²⁸	Alternate
Luxembourg	Dr Jean-Claude Schmit	Member
	Dr Thomas Dentzer	Alternate

²¹ Appointed Alternate from January to May 2022, nomination pending.

²² Appointed Member to replace Dr Jozef Dlhý as of October 2022.

²³ Appointed Alternate as of October 2022.

²⁴ Appointed Member to replace Ms Bolette Søborg as of November 2022.

²⁵ Appointed Alternate to replace Ms Stine Ulendorf Jacobsen as of November 2022.

²⁶ Appointed Member to replace Dr Hans-Ulrich Holtherm as of March 2022.

²⁷ Appointed Alternate to replace Ms Aggeliki Dreliozis as of March 2022.

²⁸ Appointed Alternate from January to August 2022, nomination pending.

Country	Name	Member / Alternate
Malta	Dr Patricia Vella Bonanno	Member
	Dr Mariella Borg Buontempo	Alternate
Netherlands	Mr Bas Joost Lambert Derks ²⁹	Member
	Nomination pending	Alternate
Poland	Mr Dariusz Poznański	Member
	Mr Michał Ilnicki	Alternate
Portugal	Mr Rui Portugal	Member
	Ms Cristina Abreu Santos	Alternate
Romania	Dr Amalia Șerban ³⁰	Member
	Dr Anca Sirbu ³¹	Alternate
Slovakia	Dr Ján Mikas	Member
	Ms Lucia Paulíková	Alternate
Slovenia	Dr Mojca Gobec	Member
	Mr Mario Fafangel	Alternate
Spain	Dr Pilar Aparicio Azcárraga	Member
	Dr Manuel Cuenca Estrella	Alternate
Sweden	Dr Karin Tegmark Wisell ³²	Member
	Mr Dariosh Bidar ³³	Alternate
European Parliament	Ms Zofija Mazej Kukovič Ms Maria Eleni Koppa Mr Antonio Fernando Correia de Campos	Member Member Alternate
European Commission	Mr Pierre Delsaux ³⁴ Mr John F Ryan Ms Isabel de la Mata Barranco Ms Ingrid Keller Ms Barbara Kerstiëns Ms Catherine Berens	Member Member Member Alternate Member Alternate
Iceland (EEA/EFTA)	Ms Ásthildur Knútsdóttir Ms Gudlin Steinsdóttir ³⁵	Member Alternate
Liechtenstein (EEA/EFTA)	Dr Silvia Dehler	Member
Norway (EEA/EFTA)	Mr Øystein Riise Mr Oliver Kacelnik ³⁶	Member Alternate

²⁹ Appointed Member to replace Ms Ciska Scheidel as of October 2022.

³⁰ Appointed Member to replace Mr Andrei Baciú as of February 2022.

³¹ Appointed Alternate to replace Mr Paul Daniel Iordache as of February 2022.

³² Appointed Member to replace Dr Johan Carlson as of March 2022.

³³ Appointed Alternate to replace Mr Andreas Johansson as of June 2022.

³⁴ Appointed Member from January to February 2022.

³⁵ Appointed Alternate to replace Ms Áslaug Einarsdóttir as of February 2022.

³⁶ Appointed Alternate to replace Dr Siri Helene Hauge as of October 2022.

Members and Alternates of the ECDC Advisory Forum

Country	Name	Member/Alternate
Austria	Professor Dr Petra Apfalter	Member
	Dr Bernhard Benka	Alternate
Belgium	Nomination pending	Member
	Dr Koen Blot	Alternate
Bulgaria	Nomination pending	Member
	Dr Radosveta Filipova	Alternate
Croatia	Dr Sanja Kurečić Filipović	Member
	Dr Aleksandar Šimunović	Alternate
Cyprus	Dr Linos Hadjihannas	Member
	Dr Costas Constantinou	Alternate
Czechia	Dr Jan Kynčl	Member
	Dr Kateřina Fabiánová	Alternate
Denmark	Professor Henrik Ullum	Member
	Dr Tyra Grove Krause	Alternate
Estonia	Nomination pending	Member
	Dr Natalia Kerbo	Alternate
Finland	Dr Mika Salminen	Member
	Dr Carita Savolainen-Kopra	Alternate
France	Dr Bruno Coignard	Member
	Ms Isabelle Bonmarin	Alternate
Germany	Dr Osamah Hamouda	Member
	Dr Ute Rexroth	Alternate
Greece	Dr Sotirios Tsiodras	Member
	Dr George Panagiotakopoulos	Alternate
Hungary	Ms Zsuzsanna Molnár	Member
	Ms Ágnes Hajdu	Alternate
Ireland	Dr Lorraine Doherty ³⁷	Member
	Dr Derval Igoe	Alternate
Italy	Dr Silvia Declich	Member
	Dr Giuseppe Ippolito	Alternate
Latvia	Dr Jurijs Perevoščikovs	Member
	Nomination pending	Alternate
Lithuania	Ms Jugita Pakalniškienė	Member
	Ms Rolanda Valintėlienė	Alternate
Luxembourg	Dr Isabel De La Fuente Garcia	Member
	Professor Friedrich Muehlschlegel	Alternate
Malta	Dr Charmaine Gauci	Member
	Dr Tanya Melillo Fenech	Alternate
Netherlands	Professor Dr Jaap van Dissel	Member
	Dr Susan van den Hof	Alternate
Poland	Dr Malgorzata Sadkowska-Todys	Member
	Dr Magdalena Rosińska	Alternate
Portugal	Mr Carlos Matias Dias	Member
	Dr Ana Maria Correia	Alternate

³⁷ Appointed Member from January to October 2022.

Country	Name	Member / Alternate
Romania	Dr Adriana Pistol ³⁸ Dr Radu Cucui ³⁹	Member Alternate
Slovakia	Dr Mária Avdičová Professor Henrieta Hudečková	Member Alternate
Slovenia	Dr Irena Klavs Dr Marta Grgič-Vitek	Member Alternate
Spain	Dr Fernando Simón Dr Marina Pollan Santamaria	Member Alternate
Sweden	Ms Anneli Carlander ⁴⁰ Dr Birgitta Lesko	Member Alternate
Observers		
Albania (candidate country)	Nomination pending	
Iceland (EEA/EFTA)	Ms Kamilla Jósefsdóttir ⁴¹ Ms Gudrun Aspelund ⁴²	Member Alternate
Liechtenstein (EEA/EFTA)	Nomination pending	Member
Montenegro (candidate country)	Nomination pending	Observer
Norway (EEA/EFTA)	Dr Trygve Ottersen ⁴³ Dr Preben Aavitsland ⁴⁴	Member Alternate
Serbia (candidate country)	Nomination pending	
North Macedonia (candidate country)	Nomination pending	
Turkey (candidate country)	Professor Mustafa Gokhan Gozel	Observer
Non-governmental organisations		
European Institute of Women's Health	Ms Rebecca Moore	Member
European Public Health Association Association of Schools of Public Health in the European Region	Dr Aura Timen Mr John Duncan Middleton	Member Member
European Liver Patients' Association	Mr Marko Korenjak	Alternate
European Society for Blood and Marrow Transplantation	Mr Jose Rafael De la Camara De Llanza	Alternate
European Association of Hospital Pharmacists	Ms Inese Sviestina	Alternate

³⁸ Appointed Member to replace Dr Florin Popovici as of February 2022

³⁹ Appointed Alternate as of February 2022.

⁴⁰ Appointed Member to replace Ms Britta Björkholm as of October 2022.

⁴¹ Appointed Member to replace Dr Thorolfur Gudnason as of May 2022.

⁴² Appointed Alternate as of August 2022.

⁴³ Appointed Member to replace Dr Frode Forland as of September 2022.

⁴⁴ Appointed Alternate to replace Dr Line Vold as of September 2022.

ECDC Coordinating Competent Bodies

In 2010, ECDC decided to strengthen and simplify its way of working with the Member States and in 2011, a new process was introduced with the nomination of one national Coordinating Competent Body (CCB) in each EU/EEA Member State.

Country	Name of Coordinating Competent Body
Austria	Federal Ministry of Social Affairs, Health, Care and Consumer Protection Radetzkystrasse 2, 1031 Vienna http://www.bmg.gv.at
Belgium	Sciensano Rue Juliette Wytsman, 14 1050 Brussels https://www.sciensano.be/en
Bulgaria	National Center of Infectious and Parasitic Diseases Yanko Sakazov Blvd. 26, 1504 Sofia http://www.ncipd.org
Croatia	Croatian Institute of Public Health Rockefellerova 7, 10000 Zagreb http://www.hzjz.hr
Cyprus	Ministry of Health Directorate Medical and Public Health Services 1 Prodromou, 1449 Nicosia http://www.moh.gov.cy
Czechia	National Institute of Public Health Šrobárova 48, 10042 Prague 10 http://www.szu.cz
Denmark	Danish Health Authority Axel Heides Gade 1, 2300 Copenhagen http://sundhedsstyrelsen.dk
Estonia	Health Board Tartu road 85, 10115 Tallinn http://www.terviseamet.ee
Finland	National Institute for Health and Welfare Mannerheimintie 166, 00271 Helsinki http://www.thl.fi
France	French Public Health Agency 12 rue du Val d'Osne, 94415 Saint-Maurice http://www.santepubliquefrance.fr
Germany	Robert Koch Institute Nordufer 20, 13353 Berlin http://www.rki.de
Greece	National Public Health Organization Agrafon Street 3-5, 15123 Marousi https://eody.gov.gr/eody/
Hungary	National Public Health Center Albert Flórián út 2-6, 1097 Budapest https://www.nnk.gov.hu
Iceland	Centre of Health Security and Communicable Disease Prevention Austurströnd 5, 170 Seltjarnarnes http://www.landlaeknir.is
Ireland	Health Protection Surveillance Centre 25-27 Middle Gardiner Street, Dublin http://www.hpsc.ie
Italy	Ministry of Health Via Giorgio Ribotta 5, 00144 Rome http://www.salute.gov.it
Latvia	Centre for Disease Prevention and Control Duntes 22, 1005 Riga http://spkc.gov.lv

Country	Name of Coordinating Competent Body
Liechtenstein	Principality of Liechtenstein Äulestrasse 51, 9490 Vaduz http://www.ag.llv.li
Lithuania	Ministry of Health Vilniaus 33, 01506 Vilnius http://www.sam.lt
Luxembourg	Directorate of Health 13a rue de Bitburg, 1273 Luxembourg http://www.ms.public.lu
Malta	Superintendence of Public Health Ministry for Energy and Health St Luke's Hospital, Pjazza San Luqa MRS9010 Pieta https://deputyprimeminister.gov.mt/en/sph/Pages/Superintendence-of-Public-Health.aspx
Netherlands	National Institute for Public Health and the Environment Antonie van Leeuwenhoeklaan 9, 3720 BA Bilthoven http://www.rivm.nl
Norway	National Institute of Public Health PO BOX 4404 Nydalen, 0403 Oslo http://www.fhi.no
Poland	National Institute of Public Health – National Institute of Hygiene 24 Chocimska Street, 00791 Warsaw http://www.pzh.gov.pl
Portugal	Directorate-General of Health Ministry of Health Alameda D. Afonso Henriques 45, 1049-005 Lisbon www.dgs.pt
Romania	National Institute of Public Health Dr Leonte Anastasievici 1-3, Sector 5, 050463 Bucharest http://www.insp.gov.ro/
Slovakia	Public Health Authority of the Slovak Republic Trnavská cesta 52, 82645 Bratislava http://www.uvzs.sk
Slovenia	National Institute of Public Health Trubarjeva cesta 2, 1000 Ljubljana http://www.nijz.si
Spain	Ministry of Health, Social Services and Equality Paseo del Prado 18–20, 7 planta, 28071 Madrid http://www.msssi.es
Sweden	Public Health Agency of Sweden Nobels väg 18, 17182 Solna http://folkhalsomyndigheten.se/

Annex 10. ECDC outputs published in 2022

Risk assessments

January

[Assessment of the further spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update](#)

February

[Multi-country outbreak of Salmonella Enteritidis sequence type \(ST\)11 infections linked to eggs and egg products](#)

[Rapid risk assessment: *Candida auris* outbreak in healthcare facilities in northern Italy, 2019-2021](#)

[Rapid risk assessment: Increase in extensively-drug resistant Shigella sonnei infections in men who have sex with men in the EU/EEA and the UK](#)

April

[Increase in severe acute hepatitis cases of unknown aetiology in children](#)

[Multi-country outbreak of monophasic Salmonella Typhimurium sequence type \(ST\) 34 linked to chocolate products](#)

May

[Multi-country outbreak of monophasic Salmonella Typhimurium sequence type 34 linked to chocolate products – first update](#)

[Risk assessment: Monkeypox multi-country outbreak](#)

July

[Monkeypox multi-country outbreak - first update](#)

October

[Increase of reported diphtheria cases among migrants in Europe due to *Corynebacterium diphtheriae*, 2022](#)

[Monkeypox multi-country outbreak - second update](#)

November

[Rapid Risk Assessment: Risk of Sudan virus to EU/EEA citizens considered very low](#)

[Multi-country outbreak of Salmonella Mbandaka ST413 possibly linked to consumption of chicken meat in the EU/EEA, Israel and the UK](#)

[Joint ECDC-WHO Regional Office for Europe Hepatitis of Unknown Origin in Children Surveillance Bulletin](#)

December

[Intensified circulation of respiratory syncytial virus \(RSV\) and associated hospital burden in the EU/EEA](#)

Technical reports

January

[Interim analysis of COVID-19 vaccine effectiveness against Severe Acute Respiratory Infection due to laboratory-confirmed SARS-CoV-2 among individuals aged 50 years and older, ECDC multi-country study – first update](#)

[External quality assessment schemes to support European surveillance of Legionnaires' disease 2020-2021 - Western Balkans](#)

February

[Considerations for the use of face masks in the community in the context of the SARS-CoV-2 Omicron variant of concern](#)

[COVID-19 vaccine effectiveness in adolescents aged 12–17 years and interim public health considerations for administration of a booster dose](#)

[Considerations for the use of antibody tests for SARS-CoV-2 – first update](#)

[External quality assessment schemes to support European surveillance of Legionnaires' disease 2020-2021 - EU/EEA countries](#)

[European External Influenza Virus Quality Assessment Programme – 2020 data](#)

[Data collection on COVID-19 outbreaks in closed settings: long-term care facilities, version 2.1](#)

[Evaluation of the SARS-CoV-2 testing policy in Belgium from June to December 2021](#)

March

[Interim analysis of COVID-19 vaccine effectiveness against Severe Acute Respiratory Infection due to laboratory-confirmed SARS-CoV-2 among individuals aged 30 years and older, ECDC multi-country study – second update](#)

[Analysis of COVID-19 contact tracing data from Ireland, Italy and Spain – 2020 data](#)

April

[Testing for tuberculosis infection and screening for tuberculosis disease among refugees arriving in European countries from Ukraine](#)

[Core competencies in applied infectious disease epidemiology in Europe](#)

[Transitioning beyond the acute phase of the COVID-19 pandemic: Approaches and tools used by a sample of EU countries in the transition and de-escalation phase – interim report](#)

[Assessment of point-of-care testing devices for infectious disease surveillance, prevention and control – a mapping exercise](#)

[A scoping review of point-of-care testing devices for infectious disease surveillance, prevention and control](#)

[External quality assessment scheme for Bordetella pertussis serology – 2020 data](#)

June

[Surveillance, prevention and control of leishmaniases in the European Union and its neighbouring countries](#)

[Monitoring of responses to the hepatitis B and C epidemics in EU/EEA countries – 2020 data](#)

July

[ECDC expert consultation on knowledge and research gaps related to the COVID-19 public health response](#)

[Reverse identification key for mosquito species](#)

[Evidence brief: Pre-exposure prophylaxis for HIV prevention in Europe and Central Asia - Monitoring implementation of the Dublin Declaration on Partnership to fight HIV/AIDS in Europe and Central Asia – 2020/2021 progress report](#)

[Evidence brief: HIV testing in Europe and Central Asia - Monitoring implementation of the Dublin Declaration on Partnership to fight HIV/AIDS in Europe and Central Asia – 2021 progress report](#)

[Monitoring HIV pre-exposure prophylaxis programmes in the EU/EEA](#)

August

[Long-term qualitative scenarios and considerations of their implications for preparedness and response to the COVID-19 pandemic in the EU/EEA](#)

[Eighth external quality assessment scheme for Listeria monocytogenes typing](#)

September

[The EU experience in the first phase of COVID-19: implications for measuring preparedness](#)

November

[Assessing the health burden of infections with antibiotic-resistant bacteria in the EU/EEA, 2016-2020](#)

October

[External quality assessment \(EQA\) of the performance of laboratories participating in the European Antimicrobial Resistance Surveillance Network \(EARS-Net\), 2021](#)

[Prevalence of post COVID-19 condition symptoms: a systematic review and meta-analysis of cohort study data, stratified by recruitment setting](#)

[Generic protocol for ECDC studies of COVID-19 vaccine effectiveness against confirmed SARS-CoV-2 using healthcare worker cohorts, v.1.0](#)

[Laboratory support for SARS-CoV-2 virus neutralisation in the EU/EEA - a pilot study](#)

[Spread of the SARS-CoV-2 Omicron variant sub-lineage BQ.1 in the EU/EEA](#)

November

[Use and impact of new technologies for evidence synthesis - Literature review and qualitative data collection](#)

[Generic protocol for ECDC studies of COVID-19 vaccine effectiveness against confirmed SARS-CoV-2 using healthcare worker cohorts, version 2.0](#)

[A systematic literature review of interventions to increase linkage to care and adherence to treatment for hepatitis B and C, HIV and tuberculosis among people who inject drugs](#)

[Summary of Expert Panel meeting discussions on interventions to increase linkage to care and adherence to treatment for hepatitis B and C, HIV and tuberculosis among people who inject drugs](#)

[Interim analysis of COVID-19 vaccine effectiveness in healthcare workers, an ECDC multi-country study, May 2021–July 2022](#)

[Continuum of HIV care - Monitoring implementation of the Dublin Declaration on partnership to fight HIV/AIDS in Europe and Central Asia: 2021 progress report](#)

December

[Euro-GASP external quality assessment scheme for Neisseria gonorrhoeae antimicrobial susceptibility testing 2021](#)

[External quality assessment schemes to support European Surveillance of Legionnaires' disease in EU/EEA countries, 2021-2022](#)

[Antiviral resistance monitoring capability and capacity for SARS-CoV-2 and influenza within the EU/EEA](#)

Factsheets

March

[Factsheet about Japanese encephalitis](#)

[Factsheet about Diagnostic testing and screening for SARS-CoV-2](#)

April

[Factsheet about Crimean-Congo haemorrhagic fever](#)

June

[Factsheet about Marburg virus disease](#)

[Factsheet about Ebola disease](#)

September

[Factsheet for health professionals on mpox \(monkeypox\)](#)

November

[Factsheet on Toscana virus infection](#)

Surveillance reports

January

[Antimicrobial resistance surveillance in Europe 2022–2020 data](#) (jointly with WHO Regional Office for Europe)

March

[Avian influenza overview December 2021–March 2022](#) (jointly with EFSA)

[The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2019–2020](#) (jointly with EFSA)

[Tuberculosis surveillance and monitoring in Europe 2022 – 2020 data](#) (jointly with WHO Regional Office for Europe)

June

[Avian influenza overview March – June 2022](#) (jointly with EFSA)

September

[Avian influenza overview June – September 2022](#) (jointly with EFSA)

October

[Gonococcal antimicrobial susceptibility surveillance in the European Union/European Economic Area - Summary of results for 2020](#)

November

[Surveillance of antimicrobial resistance in Europe, 2021 data](#) (Executive summary, jointly with WHO Regional Office for Europe)

December

[Prevention of hepatitis B and C in the EU/EEA](#)

[Avian influenza overview September – December 2022](#) (jointly with EFSA)

[The European Union One Health 2021 Zoonoses Report](#) (jointly with EFSA)

[HIV/AIDS surveillance – 2021 data](#) (jointly with WHO Regional Office for Europe)

Technical guidance

January

[Guidance on ending the isolation period for people with COVID-19, third update](#)

February

[Sequencing of SARS-CoV-2: first update](#)

March

[HIV Pre-Exposure Prophylaxis in the EU/EEA and the UK: Implementation, standards and monitoring](#)

[Operational public health considerations for the prevention and control of infectious diseases in the context of Russia's aggression towards Ukraine](#)

[Guidance for the prevention and control of COVID-19 in temporary reception centres in the context of the large numbers of people fleeing Ukraine](#)

April

[Hepatitis of unknown origin – Reporting protocol 2022](#)

[Public health considerations and evidence to support decisions on the implementation of a second mRNA COVID-19 vaccine booster dose](#)

[Hepatitis of unknown origin - Reporting protocol 2022](#)

[Testing for tuberculosis infection and screening for tuberculosis disease among refugees arriving in European countries from Ukraine](#)

[Information to guide individual health assessment of refugees fleeing the war in Ukraine - Considerations for healthcare workers](#)

May

[COVID-19 Aviation Health Safety Protocol: Operational guidelines for the management of air passengers and aviation personnel in relation to the COVID-19 pandemic](#)

[Guidance for diagnostic testing of cases with severe acute hepatitis of unknown aetiology in children](#)

June

[Interim advice on Risk Communication and Community Engagement during the monkeypox outbreak in Europe, 2022](#)

[Key considerations for on-site assessment of refugee transit points and accommodation centres in the EU/EEA in the context of the refugees fleeing the war in Ukraine](#)

[Technical guidance for antigenic SARS-CoV-2 monitoring](#)

[Interim advice for public health authorities on summer events during the monkeypox outbreak in Europe, 2022](#)

[Considerations for contact tracing during the monkeypox outbreak in Europe, 2022](#)

[Early warning, alert and response to acute public health events in refugee-hosting countries](#)

July

[Operational considerations for respiratory virus surveillance in Europe](#)

[Risk communication and community engagement approaches during the monkeypox outbreak in Europe, 2022](#)

[Preliminary public health considerations for COVID-19 vaccination strategies in the second half of 2022](#)

[Monkeypox outbreak: Resource toolkit for event organisers \(Joint ECDC and WHO\)](#)

[Operational considerations for the provision of the HIV continuum of care for refugees from Ukraine in the EU/EEA](#)

August

[Generic protocol for COVID-19 vaccine effectiveness studies at long-term care facilities in the EU/EEA](#)

[Monkeypox infection prevention and control guidance for primary and acute care settings](#)

[Assessment of workforce capacity and training needs for the prevention and control of communicable diseases in the EU/EEA - Report on 2021 survey](#)

[Methods for the detection and characterisation of SARS-CoV-2 variants - second update](#)

September

[Overview of the implementation of COVID-19 vaccination strategies and deployment plans in the EU/EEA](#)

[Pilot protocol for a COVID-19 vaccine effectiveness study using health data registries](#)

[Monkeypox \(MPX\) Reporting Protocol 2022](#)

October

[Testing and detection of zoonotic influenza virus infections in humans in the EU/EEA, and occupational safety and health measures for those exposed at work](#)

[Point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals – protocol version 6.1](#)

[Influenza Reporting Protocol 2022 - Seasonal influenza](#)

November

[Interim analysis of COVID-19 vaccine effectiveness against Severe Acute Respiratory Infection due to SARS-CoV-2 in individuals aged 20 years and older – third update](#)

December

[Laboratory diagnosis and molecular surveillance of Bordetella pertussis](#)

[Models of good practice for community-based testing, linkage to care and adherence to treatment for hepatitis B and C, HIV, and tuberculosis and for health promotion interventions to prevent infections among people who inject drugs](#)

[ECDC expert consultation on the implementation and evaluation of non-pharmaceutical interventions Severe Acute Respiratory Infections \(SARI\) Reporting Protocol Version 3.6](#)

[Integrated respiratory virus surveillance RESPISEVERE and RESPISURV data sets Reporting Protocol Version 1.2](#)

[Coronavirus disease 2019 \(COVID-19\) data Reporting Protocol Version 6.2](#)

Corporate publications**January**

[Single Programming Document 2022-2024](#)

June

[Consolidated Annual Activity Report 2021](#)

October

[ECDC Digital Roadmap 2022–2027](#)

Regular publications

[Influenza virus characterisation, summary Europe Measles and rubella monitoring \(maps\)](#)

[Communicable disease threats report](#)

Annual Epidemiological Report series on communicable diseases in Europe

New chapters are published as they become available.

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[Dengue – Annual Epidemiological Report for 2020](#)

[Chikungunya virus disease – Annual Epidemiological Report for 2020](#)

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[Legionnaires' disease – Annual Epidemiological Report for 2020](#)

[Echinococcosis – Annual Epidemiological Report for 2018](#)

[Echinococcosis – Annual Epidemiological Report for 2019](#)

[Echinococcosis – Annual Epidemiological Report for 2020](#)

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[Trichinellosis – Annual Epidemiological Report for 2018](#)

[Anthrax – Annual Epidemiological Report for 2019](#)

[Anthrax – Annual Epidemiological Report for 2020](#)

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[Hepatitis B – Annual Epidemiological Report for 2020](#)

[Hepatitis C – Annual Epidemiological Report for 2020](#)

[Antimicrobial resistance in the EU/EEA \(EARS-Net\) – Annual Epidemiological Report for 2020](#)

[Congenital syphilis – Annual Epidemiological Report for 2019](#)

[Invasive meningococcal disease – Annual Epidemiological Report for 2018](#)

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[Anthrax – Annual Epidemiological Report for 2017](#)

[Anthrax – Annual Epidemiological Report for 2018](#)

September

[Tuberculosis – Annual Epidemiological Report for 2020](#)

[Congenital toxoplasmosis – Annual Epidemiological Report for 2019](#)

[Yersiniosis – Annual Epidemiological Report for 2020](#)

[Brucellosis – Annual Epidemiological Report for 2020](#)

[Brucellosis – Annual Epidemiological Report for 2019](#)

[Shiga toxin-producing Escherichia coli \(STEC\) infection – Annual Epidemiological Report for 2020](#)

[Chlamydia infection – Annual Epidemiological Report for 2019](#)

[Syphilis – Annual Epidemiological Report for 2019](#)

[Lymphogranuloma venereum – Annual Epidemiological Report for 2019](#)

[Shigellosis – Annual Epidemiological Report for 2018](#)

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[Leptospirosis – Annual Epidemiological Report for 2018](#)

[Leptospirosis – Annual Epidemiological Report for 2019](#)

[Leptospirosis – Annual Epidemiological Report for 2020](#)

[Trichinellosis – Annual Epidemiological Report for 2020](#)

[Tick-borne encephalitis – Annual Epidemiological Report for 2020](#)

November

[Antimicrobial resistance in the EU/EEA \(EARS-Net\) – Annual Epidemiological report for 2021](#)

[Salmonellosis – Annual Epidemiological Report for 2020](#)

[*Clostridioides \(Clostridium\) difficile* infections – Annual Epidemiological Report for 2016–2017](#)

[Antimicrobial consumption in the EU/EEA \(ESAC-Net\) – Annual Epidemiological Report for 2021](#)

[Brucellosis – Annual Epidemiological Report for 2018](#)

[Leptospirosis – Annual Epidemiological Report for 2017](#)

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[Variant Creutzfeldt–Jakob disease – Annual Epidemiological Report for 2019](#)

[Variant Creutzfeldt–Jakob disease – Annual Epidemiological Report for 2018](#)

[Giardiasis \(lambliasis\) – Annual Epidemiological Report for 2019](#)
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[Yersiniosis – Annual Epidemiological Report for 2021](#)
[STEC infection – Annual Epidemiological Report for 2021](#)
[Hepatitis B – Annual Epidemiological Report for 2021](#)
[Shigellosis – Annual Epidemiological Report for 2019](#)

[Seasonal influenza 2021–2022 – Annual Epidemiological Report](#)

Annex 11. Negotiated procedures without prior publication of a contract notice conducted in 2022

Reference	Title	Type of procedure: Art. 11.1. of the Financial Regulation	Amount	Contractor	Contract reference
NP/2022/PHF/25211	25211 - Genomic Epidemiology and public health bioinformatics training courses in the EU/EEA, the Western Balkans and Türkiye.	Annex 1 - 11.1 (a) - Follow-up of an open/restricted procedure where no (or no suitable) tenders/requests to participate have been submitted	5,243,000.00	DANMARKS TEKNISKE UNIVERSITET* TECHN	ECDC/2022/024
NP/2021/DPR/25121	Support to microbiology- related activities and capacity building focusing on COVID-19 and influenza in the EU/EEA, the Western Balkans and Turkey and includes laboratory support, training, and standardisation Lot 1: Centralised laboratory support.	Annex 1 - 11.1 (a) - Follow-up of an open/restricted procedure where no (or no suitable) tenders/requests to participate have been submitted	6,057,000.00	KONINKRIJK DER NEDERLANDEN *ROYAUM	ECDC/2022/001
NP/2022/SMS/25200	Mathematical Modelling and Economic Evaluation	Amendment linked to a negotiated procedure Point 11 Annexe I FR 2018 (Art.134 (e) RAP FR2012)	1,031,500	LONDON SCHOOL OF HYGIENE AND TROPIC	Amendment to ECDC/2019/019
NP/2022/SMS/25200	Mathematical Modelling and Economic Evaluation	Amendment linked to a negotiated procedure Point 11 Annexe I FR 2018 (Art.134 (e) RAP FR2012)	1,031,500	UNIVERSITY OF BRISTOL	Amendment nr 1 to ECDC/2019/032
NP/2022/SMS/25200	Mathematical Modelling and Economic Evaluation	Amendment linked to a negotiated procedure Point 11 Annexe I FR 2018 (Art.134 (e) RAP FR2012)	1,031,500	KONINKRIJK DER NEDERLANDEN *ROYAUM	Amendment nr 1 to ECDC/2019/033
NP/2022/SMS/25200	Mathematical Modelling and Economic Evaluation	Amendment linked to a negotiated procedure Point 11 Annexe I FR 2018 (Art.134 (e) RAP FR2012)	1,031,500	UNIVERSITEIT HASSELT	Amendment nr 2 to ECDC/2019/034
NP/2022/SMS/25200	Mathematical Modelling and Economic Evaluation	Amendment linked to a negotiated procedure Point 11 Annexe I FR 2018 (Art.134 (e) RAP FR2012)	1,031,500	UNITED KINGDOM OF GREAT BRITAIN AND	Amendment nr 1 to ECDC/2019/035

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