





2022 EIOS Global Technical Meeting

The dawn of a new era for Public Health Intelligence

27 - 29 November 2022







2022 EIOS GTM

TABLE OF CONTENTS

Welcome	
The EIOS Initiative	9
Agenda Overview Day 1	10
Welcome Remarks- 2022 EIOS GTM	12
PHI Decision Maker Panel	13
Let's talk about trust	
Trust Workshop	
Trust Panel	
EIOS System Demo – Optional	
Speaker Series - Complexity of Pandemics N°3	18
Agenda Overview Day 2	20
Citizen Engagement	
Mandated authorities	
Advanced EIOS System Clinic – Optional	27
Agenda Overview Day 3	28
Connecting information in a connected world	
Working together for stronger public health intelligence	32
EIOS Implementation	33
Extra curricular	34
Luxor: Activities and Attractions	38
Egyptian cuisine	40
Helpful Arabic words and Contacts	42
Speaker Biographies	44
Acknowledgements	71
Meet the EIOS Core Team	72

Note on photography and video footage

Please note that by participating in this meeting, you acknowledge that WHO and/or its representatives may take photographs and/or video footage of all or part of the event in which you may be depicted. You agree that WHO may reproduce any of these photographs and/or video footage on any of its websites and/or on other materials and authorize third parties to do the same.

Note on WHO code of conduct

WHO is committed to enabling events at which everyone can participate in an inclusive, respectful and safe environment. WHO events are guided by the highest ethical and professional standards, and all participants are expected to behave with integrity and respect towards all those attending or involved with any WHO event. As a participant of the 2022 EIOS Global Technical Meeting, you agree to respect the WHO Code of Conduct (scan QR code for full text) to prevent harassment, including sexual harassment, at WHO events. There is zero tolerance for inappropriate behaviour.



A Word on COVID-19

The COVID-19 pandemic is not over. While enjoying the privilege of gathering in person, we want to do our best to create a safe meeting environment and urge all participants to observe some basic sanitary and infection control principles during the conference.

While in attendance at the 2022 EIOS GTM, we advise you to maintain WHO-recommended hygiene procedures at all times, including frequent hand washing (or using a suitable sanitizing alternative), avoiding touching your eyes, nose, and mouth in public places, and covering coughs or sneezes with a tissue or the inside of your elbow. Additionally, alcohol wipes will be available on the tables to clean the microphones after each use and the room will be cleaned daily.

First and foremost, we ask you to immediately isolate yourself in your room and to not enter the conference hall if you experience any signs or symptoms of COVID-19. Please notify the WHO EIOS GTM consultant Heidi Ghanem (WhatsApp: +201005679364; Email: ghanemh@who. int) if you experience symptoms or have been exposed to a COVID-19 case. If you would like to get tested, please ask for a self-testing kit or reach out to your hotel reception to arrange for an appointment with a local lab. They will send a technician to your hotel for a PCR sample collection, with results delivered in up to 24 hours.

WELCOME

Dear Colleagues and Friends,

It is with immense pleasure that we welcome you to this year's EIOS (Epidemic Intelligence from Open Sources) Global Technical Meeting, the 2022 EIOS GTM. We are thrilled that you have made it a priority to join us here in Luxor this week and we are pleased to have this meeting co-hosted by the WHO Regional Office for the Eastern Mediterranean, which has been a strong partner in expanding EIOS across the region.

The 2022 EIOS GTM is special in many ways. Not only because it is the first face-to-face GTM since 2019, due to the COVID19- pandemic, or because we are privileged to host it in Luxor, a place of historic importance and evocative surroundings, but also because it coincides with the EIOS initiative's fifth anniversary. It has been five years since WHO was tasked with the leadership of this initiative, and while five years may seem insignificant in the ancient surroundings of Luxor, being here today is a major milestone, which we are honoured to celebrate with you.

We have come a long way since 2017, and your presence here is a testimony to the growth and evolution of the EIOS initiative. Today, the global community of the initiative has grown to include more than 45 Member States (and counting!) and a steadily increasing number of international, regional, and national organizations and networks, researchers, and collaborators, many of which are represented here this week. The EIOS system continues to evolve with and adapt to the needs of our growing community of practice and the changing world around us. The EIOS initiative EIOS is a cornerstone of the new WHO Hub for Pandemic and Epidemic Intelligence based in Berlin, Germany – something we only dared to dream about when we first started. It is an exciting time in Public Health Intelligence, and it is our collective challenge to rethink and reshape this critical function to detect threats as early as possible and reduce or prevent their impact by enabling faster and better-informed decision making.

The world has changed significantly since we last physically met for the GTM in Seoul, the Republic of Korea, in 2019. Due to the COVID19- pandemic, we had to cancel the 2020 event, and in 2021 we organized the first ever virtual GTM. The 2021 GTM was a success: it was joined live by nearly 400 participants from more than 80 different countries, in addition to many others who watched the session recordings after the event. While it was exciting to experience such wide interest, to connect with multidisciplinary experts across several time zones, and to engage in inspiring sessions, we did miss the physical exchange. The GTM is all about building networks, bringing people together to dream up new ideas and to strengthen personal connections. While conferencing technology has made significant advances over the course of the pandemic, we realized that it was just not able to replace the human factor that is so vital to this meeting.

We are therefore even more excited and grateful for each and every one of you who has taken the journey and made it to Luxor this week. In this year's GTM, we want to reflect on the decision making, trust, engagement and analysis needed at national, regional and global levels for rapid detection, verification, assessment and response to health threats. And we want to focus on one of our central principles: collaboration. EIOS is not simply an information technology system or series of systems and algorithms, but rather a

community; a global network of people working together to achieve the ambitious vision of "a world where health threats are identified and responded to so early and rapidly that they have zero impact on lives and livelihoods."

It is our sincere hope that the EIOS GTM will be an opportunity for community-building, for strengthening existing connections and making new ones, for learning from one another, and for exploring collaborative efforts to drive this vision. Together we will strengthen our resolve to continually evolve and improve public health intelligence to reduce suffering and to save lives. This EIOS GTM represents the dawn of a new era for public health intelligence: We celebrate five years of EIOS and look forward to many more to come!

Thank you for being a part of this public health intelligence movement and we look forward with much anticipation to working with you.

The EIOS Core Team WHO Hub for Pandemic and Epidemic Intelligence World Health Organization November 2022

THE EIOS INITIATIVE

The Epidemic Intelligence from Open Sources (EIOS) initiative is a unique collaboration between various stakeholders around the globe. It brings together new and existing initiatives, networks and systems to create a unified all-hazards, One Health approach to early detection, verification, assessment and communication of public health threats using publicly available information. Creating a community of practice for public health intelligence (PHI) that includes Member States, international organisations, research institutes and other partners and collaborators is at the heart of the initiative; saving lives through the early detection, analysis and communication of threats for subsequent intervention its ultimate goal.

The EIOS community of practice is supported by an evolving EIOS system, which not only connects other systems and actors – including ProMED, HealthMap and the Global Public Health Intelligence Network (GPHIN) – but also promotes and catalyses new and innovative collaborative development. The EIOS system builds on a long-standing collaboration between WHO and the Joint Research Centre (JRC) of the European Commission (EC) to develop technological solutions for public health intelligence and responds to the need for a global initiative to bring together PHI efforts. It consolidates a wide array of endeavours and platforms to build a strong PHI community supported by robust, harmonised and standardised PHI systems and frameworks across organisations and jurisdictions.

Formalised at the end of 2017 under the leadership of WHO's Health Emergencies Programme (WHE), the EIOS initiative is the culmination of a joint commitment by the Global Health Security Initiative (GHSI), the JRC and WHO to enhance capacity to assess epidemic threats to global health security. The EIOS Core Team (ECT) was subsequently set up within WHE to lead EIOS and is tasked with further developing and expanding the initiative and its related aspects, including its community, technology and governance.

The ECT is hosted within the Intelligence Innovation and Integration (III) unit of the Pandemic and Epidemic Intelligence Systems (ISY) department. The department is part of the new WHO Hub for Pandemic and Epidemic Intelligence under the new Health Emergency Intelligence and Surveillance Systems division (WSE), which was created in January 2022 as part of the WHO Health Emergencies Programme (WHE). The division is responsible for building a system of collaborative intelligence enabling better decisions to avert and manage public health threats and risks. Its goal is to enable, strengthen and support countries, regional and global actors in averting and managing public health threats and risks through collaborative problem solving and decision-making for short-term action and long-term policies, informed by better data and analytics. EIOS is one of the Hub's flagship initiatives and one of its main vehicles for building a strong PHI community of practice, as well as a multidisciplinary network and innovative tools and solutions to support it.

As a global collaboration, the EIOS initiative is governed by a -12member Coordination Group (CG) with representatives from various organisations. The CG meets quarterly to discuss and advise on developments and priorities for the initiative and system.

While the ECT is a small team located at the WHO Hub in Berlin, Germany [transition from WHO headquarters in Geneva, Switzerland, is ongoing], it is supported by a team of professionals at all six WHO regional offices. Together with EIOS focal points at collaborating organisations and networks represented by the CG, they form the wider Global EIOS Support Team (GEST), making EIOS a truly global collaboration led by WHO.



Time	Sunday, 27 November 2022
08:00	Registration
09:00	Welcome Remarks
10:10	Session 1: PHI decision maker panel
11:00	Break
11:30	Session 2: Let's talk about trust
12:05	Trust Workshop - Part 1
12:55	Break – Lunch
14:25	Trust Workshop - Part 2
15:55	Trust Panel
16:50	Wrap up
17:15	EIOS System Demo (optional)
18:00	Speaker Series – Complexity of Pandemics N°3
19:30	Welcome Reception





Welcome to the 2022 EIOS Global Technical Meeting in Luxor!

As we open this year's event, representatives from the EIOS Core Team will give you a quick overview of what to expect over the GTM's three days before handing over for a number of welcome remarks from high level representatives of the World Health Organization's Emergency Programme, our event co-hosts from the WHO Regional Office for the Eastern Mediterranean, as well as the Egyptian Ministry of Health and Population, Egypt was one of the first Member States to join the EIOS initiative in 2019 and it is our special honour to be holding this year's event in the land of the Pharaohs!

Hosts



Philip AbdelMalik **Unit Head** Intelligence Innovation and Integration unit (III) World Health Organization



Yasmin Rabiyan **Engagement Officer** Intelligence Innovation and Integration unit (III) World Health Organization

Speakers



Ahmed Al-Mandhari

Regional Director WHO Regional Office for the Eastern Mediterranean (Remote participation)



Mike Ryan

Executive Director WHO Health **Emergencies** Programme World Health Organization (Video message)



Ahmed ElSobky **Deputy Minister**

and Chairman of the General Authority of Healthcare Ministry of Health and Population, Egypt



Richard **Brennan**

Regional **Emergency** Director WHO Regional Office for the Eastern Mediterranean



Chikwe Ihekweazu Assistant

Director-General World Health Organization



Oliver Morgan

Director of Pandemic and Epidemic Intelligence Systems World Health Organization

































"Evidence-based decision-making" is an all-too-familiar phrase, but is it actually put into practice, or do we succumb to "decision-based evidence-making"? What should the relationship between science and politics look like, what did it look like over the past three years of COVID19-, and what has the impact been on lives and livelihoods, societies and economies? Where were the gaps and how can public health intelligence make decision-and policy-making better?

Looking at experiences coming out of the last three years of the COVID19- pandemic and looking to the future, this panel will explore factors impacting the development and implementation of public-health related policies, including: the roles and interaction of scientific, societal, and economic factors; citizen reactions to implemented policies and the challenges and opportunities these present; and the information and solution needs for creating robust decision-support mechanisms.

Chair



Chikwe Ihekweazu Assistant Director-GeneralWorld Health Organization

Panelists



Joy St. John

Executive Director
Caribbean Public
Health Agency
(CARPHA)



Head of Division of
Disease Control and
Prevention
Africa Centres for
Disease Control and
Prevention (Africa CDC)

Mohammed Abdulaziz



Andrea Ammon

Director

European Centre for
Disease Prevention and
Control (ECDC)

(Remote participation)



Rabindra Abeyasinghe
WHO Representative
Malaysia, Brunei, and
Singapore
(Remote participation)



Understanding risks associated with public health threats requires transparent information sharing so that the most appropriate decisions can be taken. But as the WHO Hub for Pandemic and Epidemic Intelligence highlights in its strategy paper, "...only through collaboration and trust can we truly understand risks everywhere, wherever and whenever they occur." Through a presentation, an engaging workshop and a panel discussion, this session will discuss the concept of "trust" and the requirements for building and nurturing a "trust architecture" for the effective application of public health intelligence.

Presenter



Stephen David Reicher Professor of Psychology University of St. Andrews

Developing a trust architecture for pandemic and epidemic intelligence is a considerable undertaking that touches on many aspects: governance, legal frameworks and data-sharing agreements; data solidarity, fairness and benefits sharing; transparency about how pandemic and epidemic intelligence outputs are used; openness of technology solutions and artificial intelligence applications; security of data; combating misinformation and addressing infodemics; privacy by design principles; and public participation and people's data literacy.

WHO Hub for Pandemic and Epidemic Intelligence Strategy Paper https://pandemichub.who.int/docs/librariesprovider2/default-document-library/who-hub.pdf?sfvrsn=a8ca3 290























Workshop description:

In this workshop, GTM participants will be divided into groups to discuss how to build trust for public health intelligence. This workshop enables meaningful conversations driven by participants to reach a common outcome. The expected outcomes include perspectives on the need to build trust (with who and why?), its importance for PHI, identifying areas of improvement for building trust in the context of PHI, suggesting actions to overcome challenges encountered, and generating recommendations for the way forward to build trust.



The COVID-19 crisis has laid bare the need for robust governance in health. Advice to political leaders on COVID19- strategies was largely provided by specialist exerts or those with an established relationship with government bodies, reflecting a default governance mode which is still not inclusive. Populations, communities and civil society were largely left out; vet, inclusive dialogue initiatives are crucial to building trust and policy adherence. Social participation, although not novel in theory, is innovative in practice as decisionmakers still struggle with the 'how' of fostering health democracy and bringing people's voice into emergency responses and health policies.

> Dheepa Rajan and Kira Koch The health democracy deficit and COVID-19 Eurohealth 2020) 28-26,(3)26) https://apps.who.int/iris/bitstream/handle/338949/10665/Eurohealth-3-26--28-26eng.pdf

In this panel discussion, speakers will reflect on the main outcomes from the Trust Workshop and discuss how to build collaboration and trust in order to better nurture a "trust architecture" for the effective application of public health intelligence.

Chair



Richard Brennan Regional Emergency Director WHO Regional Office for the Eastern Mediterranean

Panelists



Boniface Dulani Director of Surveys Afrobarometer



Stephen David Reicher Professor of Psychology University of St. Andrews



Zubaida Haque Former CEO/Member of Independent SAGE The Equality Trust

























In this session, our moderator will take you on a brief journey through the EIOS system and introduce you to the different functions and features of the system. This session is tailored to anyone who is not familiar with the EIOS system and interested to learn more about it. Whether you are a new user or just curious: join us!

Moderator



Johannes Schnitzler
Medical Officer
Intelligence Innovation and
Integration unit (III)
World Health Organization



Speaker Series, Complexity Of Pandemics N°3 – Leveraging **Innovative Technologies**

Sunday, 27 November 2022 18:00 - 19:30

The Speaker Series

The WHO Hub for Pandemic and Epidemic Intelligence supports countries, regional and global actors to address future pandemic and epidemic risks with better access to data, better analytical capacities, and better tools and insights for decision making. The Hub Speaker Series takes place quarterly and seeks to highlight the complex multidisciplinary landscape of preventing, predicting, preparing for, and responding to epidemics and pandemics. In each session, a different perspective is highlighted to jointly discuss and analyse the interplay of multi-faceted risk factors that can culminate in health emergencies. Every event of this series is streamed worldwide for online attendance via the World Health Organization's YouTube channel.

Complexity of Pandemics N°3

This third session is a special edition, as it takes place at this year's EIOS GTM. Together with the EIOS community, we want to discuss how innovative and emerging technologies - in the public health intelligence space and beyond - can be leveraged to embrace the complexity of pandemics for better pandemic preparedness and response. Dr Chikwe Ihekweazu sets the scene, speaking on the technology landscape relevant to the work of the WHO Pandemic Hub. Our keynote speaker, Prof Dirk Brockmann – biologist, physicist and computational epidemiologist – speaks on complexity sciences and innovative approaches to using data for pandemic intelligence. Afterwards, we hear comments from two public health practitioners on technology applications in their daily work: Dr Nada Ghosn comments on gaps and needs in technology application in the public sector based on her experiences leading the Epidemiological Surveillance Programme at the Ministry of Health in Lebanon. Ms Kyeng Mercy Tetuh draws on her experiences working in the Africa Centres for Disease Control and Prevention in building capacities for member states on event-based surveillance. The event is moderated by Dr Philip Abdelmalik, WHO Head of the Intelligence Innovation and Integration Unit which hosts and leads the EIOS initiative.

Welcoming Remarks



Chikwe Ihekweazu Assistant Director-General World Health Organization

Chair



Philip AbdelMalik Unit Head Intelligence Innovation and Integration unit (III) World Health Organization

Presenters



Dirk Brockmann Professor of Biology, Computational Epidemiologist Humboldt University Berlin, Robert Koch Institute



Nada Ghosn Head of the **Epidemiological** Surveillance Programme Ministry of Health Lebanon



Kyeng Mercy Tetuh Coordinator for event-based surveillance African Centres for Disease Control and Prevention

WELCOME RECEPTION

Sunday, 27 November 2022 From 19.30

Following the Speaker Series, we invite you to join us for a welcome reception at the sweeping riverbank terrace of Sonesta St. George Hotel. Come to meet your fellow GTM participants while enjoying fresh drinks and delicious, light food next to the "lifeline of Egyptian civilization", the Nile.



Time	Monday, 28 November 2022
07:00	Pharaoh run (optional)
08:00	Participants' arrival & sign in
09:00	Welcome Day 2
09:10	Session 3: Citizen Engagement
10:10	Citizen Engagement Workshop - Part 1
10:50	Break
11:15	Citizen Engagement Workshop - Part 2
12:30	Citizen Engagement Panel
13:00	Break - Lunch
14:30	Session 4: Mandated authorities - Part 1 International
15:10	Session 4: Mandated authorities - Part 2 Regional
15:50	Break
16:20	Session 4: Mandated authorities - Part 3 National
17:15	Wrap up
17:45	Advanced EIOS System Clinic (optional)





A recently published landscape review "...demonstrated the breadth of applicability of participatory surveillance around the world to collect data from community members and trained volunteers in order to inform the detection of events, from invasive plant pests to weekly influenza symptoms."

McNeil C, Verlander S, Divi N, Smolinski M. The Landscape of Participatory Surveillance Systems Across the One Health Spectrum: Systematic Review. JMIR Public Health Surveill. 2022 Aug 8)8;5):e38551. doi: 38551/10.2196. PMID: 35930345: PMCID: PMC9391976.

In this session, we will hear from a number of experts on various initiatives aimed at engaging and including citizens in the lead-up to further discussions on the role of citizens as part of the public health intelligence process.

Chair



John Sung Jin Lee

Consultant - Strategic Advisor

HIVE Platform Global Development
World Health Organization

Presenters



Sarah Hess
Technical Officer
Partnerships and
Strategy
World Health
Organization



Onicio Leal Neto
Digital Innovation
Specialist
Ending Pandemics



Executive Director Ending Pandemics (Remote participation)

Nomita Divi



Dr Shaimaa Abukamer

Event Based
Surveillance
Coordinator
Department of

Department of Epidemiology and Surveillance Ministry of Health and Population, Egypt



Patipat (Keng) Susumpow Managing Director Opendream

































Workshop description:

The Citizen Engagement workshop will take place in the format of a "World Café," where GTM participants will be divided into groups to discuss citizen engagement for public health intelligence (PHI). This format enables meaningful conversations driven by participants to reach a common outcome. The expected outcomes include highlighting the need for and importance of citizen engagement for PHI, identifying areas of improvement in participatory surveillance and community engagement in this context, suggesting actions to overcome challenges encountered, and generating recommendations for the way forward.



In this dialogue, we will reflect on the key highlights discussed by participants during the workshop and examine observations, pros, cons and mechanisms of citizen engagement for generating public health insights for action.



John Sung Jin Lee

Consultant - Strategic Advisor

HIVE Platform Global Development
World Health Organization



Eloise Todd Executive Director & Co FounderPandemic Action Network



In this session, international, regional and national organizations will react and respond to the topics and issues explored in the meeting thus far: decision-making in public health, trust and citizen engagement, and the relationships, dependencies and implications of each. Through presentations, panels and discussions, we will explore the roles and responsibilities of international organizations; the positioning of regional organizations and their respective visions, mandates and limitations; and the realities of national health institutes across all six WHO regions as they reflect on current developments related to public health intelligence in their countries and provide feedback on how citizens, as well as regional and international organizations, impact their day-to-day work.

Moderator



Oliver Morgan Director of Pandemic and **Epidemic Intelligence Systems** World Health Organization

Part 1: International Authorities

Chair



Leo Wolansky Director of Data Strategy and Products Pandemic Prevention Initiative The Rockefeller Foundation

Panelists



Tim Nguyen Unit Head High Impact **Events Preparedness** Impact Events Preparedness World Health Organization



Amrish Baidjoe Director MSF (OCB-LuxOR) Médecins Sans Frontières



Paolo Tizzani Veterinary **Epidemiologist** World Organisation for Animal Health























Part 2: Regional Authorities

Chair



Joy St. John **Executive Director** Caribbean Public Health Agency (CARPHA)

Panelists



Gianfranco Spiteri Principal Expert Epidemic Intelligence European Centre for Disease Prevention and Control (ECDC)



Kyeng Mercy Tetuh Event Based Surveillance Coordinator Africa Centres for Disease Control and Prevention (Africa CDC)



Naif Alharbi Director Public Health Emergency Gulf Center for Disease Control and Prevention (Gulf CDC)



Masaya Kato Programme Area Manager Health Emergency Information and Risk Assessment WHO Regional Office for South-East Asia (SEARO)

Part 3: National Authorities

Chair



Pierre Nabeth Programme Area Manager Health Emergency Information and Risk Assessment WHO Regional Office for the Eastern Mediterranean (EMRO)

Panelists



Daniel Faktaufon Senior Medical Officer Ministry of Health and Medical Services, Fiji



Diseases Monitoring Officer Rwanda Biomedical Centre



Head of the Epidemiological Surveillance Program (Esumoh) Ministry of Public Health, Lebanon



Andreas Jansen Head of the Federal Information Centre for International Health **Protection** Robert Koch Institute, Germany



Bhola Prasad Roka Statistics Officer Epidemiology and Disease Control Division Ministry of Health and Population, Nepal



Deputy Director Epidemiology and Disease Control Division Ministry of Health, Singapore

26 2022 EIOS Global Technical Meeting

































In this advanced EIOS system session, participants will be able to learn, ask and discuss advanced concepts on the use of the EIOS system. EIOS system users of all levels interested in learning further about the use of the EIOS system are welcome to join this optional clinic.

Moderators



Raquel Medialdea Carrera Training Officer Intelligence Innovation and Integration unit (III) World Health Organization



Stefany Ildefonso Acuna
Training Consultant
Intelligence Innovation
and Integration unit (III)
World Health Organization























Time	Tuesday, 29 November 2022
07:00	Nile Terrace Sun Salute
08:00	Participants' arrival & sign in
09:00	Welcome Day 3
09:10	Session 5: Connecting information in a connected world Part 1: One Health Intelligence
09:55	Session 5: Connecting information in a connected world Part 2: Better Data
10:30	Break
11:00	Session 5: Connecting information in a connected world Part 3: Insights and Analytics
12:00	Break - Lunch
13:30	Session 6: Working together for stronger public health intelligence
14:30	Break
15:00	Session 7: EIOS Implementation
16:40	Announcement of new Coordination Group and closure of 2022 EIOS GTM
17:00	END





Collaborative intelligence for better decision-making and policy setting requires an integrated approach to data and analytics across the human, animal and environment domains...but what does this mean in practice? One-Health is not a new concept; in fact, the term is now almost 20 years old and over time, many discussions, summits and partnerships have been formed around the concept, seemingly resulting in more discussions, summits and partnerships. What concrete actions need to be taken to truly bring these domains together?

This session will engage experts to describe the nature and importance of the relationships that exist between these domains, explore a paradigm shift in how we look at data and information to power better analytics, and some of the advanced techniques being pursued to enhance the generation of insights as part of public health intelligence activities.

Part 1: One Health Intelligence

Chair



Karl Schenkel
Epidemiologist
World Health Organization

Presenters



Jenny Hutchison
Head
World Animal Health
Information and
Analysis Department,
World Organisation for

Animal Health (WOAH)



Dondona
GLEWS Coordinator
Food and Agriculture
Organization of the
United Nations (FAO)

Andrea Capobianco



Charlotte Hicks
Senior Technical Officer
United Nations Environment
Programme World
Conservation Monitoring
Centre (UNEP-WCMC)





























Part 2: Better Data

Chair



Dusan Milovanovic Solution Architect Intelligence Innovation and Integration unit (III) World Health Organization

Presenters



Martin Hofmann-Apitius Head of the Department of Bioinformatics Fraunhofer Society, Institute for Algorithms and Scientific Computing (SCAI)



Krzvsztof Janowicz Professor for Cartography and **Geoinformation Science** University of Vienna, Austria (Remote Participation)

Part 3: Insights and Analytics

Chair



Johannes Schnitzler Medical Officer Intelligence Innovation and Integration unit (III) World Health Organization

Presenters



David Buckeridge Professor McGill University



Ana Bento Scientific Director Pandemic Prevention Initiative Rockefeller Foundation (Remote Participation)



Brian Doherty Project Manager Joint Research Centre of the European Commission



The COVID19- crisis highlighted the need for improved collaborations across different sectors, domains and jurisdictions. This session aims to explore mechanisms that help bridge these kinds of collaborations and various initiatives that are key to forming and supporting collaborations. The current efforts of WHO to support the design, development and governance of resulting public health solutions as global public goods will also be described and lessons learned from the Global Public Health Intelligence Network (GPHIN) will be shared

Chair



Andrew Nerlinger

Executive Director

Global Health Security Fund

Presenters



Ibrahim Mahgoub
Program Director
Epiverse
data.org



Agnes Molnar
Acting Head of Unit
European Commission
Health Emergency
Preparedness and
Response Authority
(HERA)



Julia Fitzner
Unit Head
Insights and
Analytics
World Health
Organization



Samuel Mbuthia
Open Source
Programme Office
Lead
World Health
Organization



Florence Tanguay GPHIN ManagerPublic Health Agency

of Canada



























In the last session of the meeting, representatives from the global EIOS Community of Practice will share examples of EIOS implementation in their respective countries, organizations, or networks. This session aims to demonstrate the breadth of the community behind the initiative, the different ways the EIOS system is being employed for PHI activities, success stories and milestones from the last five years as we look towards the future of the EIOS initiative.

Chair



Philip AbdelMalik Unit Head Intelligence Innovation and Integration unit (III) World Health Organization



Yasmin Rabiyan **Engagement Officer** Intelligence Innovation and Integration unit (III) World Health Organization

Presenters



Haja Fatmata Bangura **Event-Based** Surveillance Analyst (Jhpiego) Ministry of Health and Sanitation, Sierra Leone



Evangelia Petrisli MD, Microbiology Unit IRCCS Azienda Ospedaliero-Universitaria di Bologna



Janaina Sallas General Coordinator Center for Strategic Information in Health Surveillance (CIEVS Ministry of Health, Brazil)



Head of the Surveillance Section Communicable Diseases Control Center Directorate of Public Health Ministry of Health, Iraq (To be confirmed)

Dr Hanan Abdulghafoor

















EXTRA CURRICULAR

The GTM is an opportunity to learn from and connect with fellow participants inside and outside the meeting schedule. We have done our best to curate an exciting and engaging programme but we know that sitting in a conference room for three consecutive days might be draining nevertheless. For this reason, we have put together some suggestions and ideas for "extra-curricular" activities during the event days to help you make the most out of your visit to Luxor. Get together with some of your newly acquainted colleagues to join any of the below activities or organize your own!

PHARAOH RUN

Monday, 28 November 2022 07:00 - 07:45

Join Alastair Donachie, otherwise known as the EIOS categories wizard, for an early morning scenic run along the Nile River. This is a prime opportunity to explore your surroundings while recharging your energy for the day ahead. This run will be suitable for all levels (we will make sure to have a 'slow group' as well) – all you need are your running shoes and some comfortable clothes.

Meeting point: 07:00, Sonesta St. George hotel reception



NILE TERRACE SUN SALUTE

Tuesday, 29 November 2022 07:00 - 07:30



Need some fresh energy to start your final day of the 2022 EIOS GTM? What better way than to begin with yoga exercises overlooking the legendary Nile River? Join Olga Lugovska, our fantastic Engagement consultant, to work on the connection of mind and body with various physical postures and breathing techniques. Everyone is welcome, including those looking to stretch or meditate. Bring a yoga mat if you have one, otherwise a big towel will do the job.

Meeting point: 07:00, Sonesta St. George Nile Terrasse.

























KARNAK SOUND AND **LIGHT SHOW**

Monday or Tuesday, 29/28 November 2022 The Karnak Sound and Light Show highlights the dramatic history of ancient Thebes. The show narrates the achievements of some of the great Pharaohs, with poetic descriptions of ancient treasures. As visitors walk through the complex, the pharaohs arise to tell the story of their interesting lives, as haunting music mysteriously flows through this ancient city. Ancient and poetic

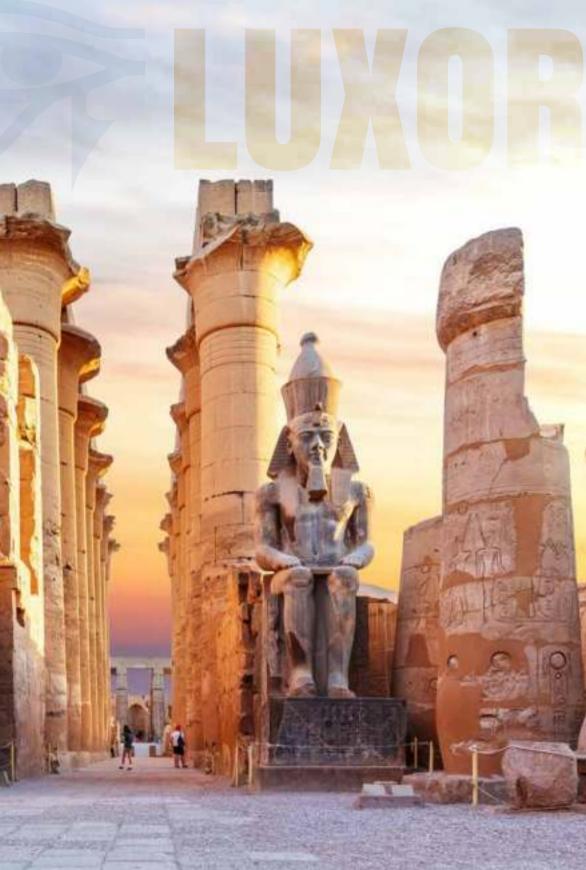
voices tell the visitors about the birth of Karnak temple and the heroic achievements of the pharaohs and the god Amun. It is an enchanting and supernatural experience to listen to sound effects and gaze at the magnificent ruins illuminated during the show.

If you are interested to join this spectacle, sign up at the hotel's on-site travel office located in the Sonesta St. George Hotel lobby. Ask for Mr. Hany Nabih or call him directly at +201226526655. Tickets are approximately 300EGP (12.5 USD). Interested participants are responsible for making their own reservations and purchasing their own tickets.

Departure Sonesta: 18:00, start of show 19:00







LUXOR: ACTIVITIES AND ATTRACTIONS

Luxor is often called the world's largest open-air museum – and rightly so! Luxor is home to iconic temples, tombs and other fascinating attractions bearing witness to Egypt's rich history and culture. Some of the major landmarks can be explored in the early morning or after the conference wraps up each day around 5:00 pm.

If you are interested to explore any excursions in the area, contact the on-site travel agent Mr. Hany Nabih at the Sonesta St. George Hotel for support. You can find him in his office in the hotel lobby or call him directly at +201226526655.

Main activities and attractions

East bank of the Nile (where the conference venue is located):





- Karnak Temple Complex, a historically significant temple that was dedicated to worship and religious rituals. This extremely large temple is one of the most impressive sites in Luxor. The Karnak Open Air Museum can be found in the same complex, which contains unique historical chapels such as the White Chapel of Sesostris I, the Red Chapel of Hatshepsut, and the Alabaster Chapel of Amenhotep I
- Luxor Temple, the site for one of the most important ancient Egyptian religious celebrations and is dated to the Eighteenth Dynasty (c.1295–1550 BC). It is at walking distance from the venue and open until 20:00.





 Luxor Museum, an archaeological museum that contains smaller pieces recovered at different archaeological sites and tombs. There are two royal mummies of pharaohs on display- Ahmose I and Ramesses I.

West bank of the Nile (in case you have some extra time):





- Valley of the Kings, the ancient burial ground for many Egyptian pharaohs. Visitors can enter several tombs, including the Tomb of Ramses VI. The art and architecture within the tombs are well preserved and extraordinarily impressive.
- Temple of Hatshepsut, a mortuary temple dedicated to the longest ruling female of Ancient Egypt, Queen Hatshepsut. This restored temple is striking and decorated with statues, sphinxes, and reliefs. The history of Queen Hatshepsut is not to be missed.





 Valley of the Queens, the ancient burial ground for many of the wives of Egyptian pharaohs. While not as luxurious as their male counterparts' tombs, these sites are still very interesting and worthwhile to visit. The tomb of Queen Nefertari can be found in the Valley of the Queens, which has well-preserved painted pharaonic designs and inscriptions.

Other activities in Luxor

- **Nile River Felucca Ride** Sail the Nile River in a traditional Egyptian felucca sailboat (can be arranged for short cruises past conference times, tbc)
- City Tour by Horse Carriage Explore Luxor by horse carriage (can be arranged past conference times)
- Visit the local bazar to shop for souvenirs and local crafts (can be arranged past conference times)
- Sunrise Hot Air Balloon Rides Taking off from the west bank of the Nile the balloon ride will offer you a bird's eye perspective of some of Luxor's main attractions (might not be possible to arrange during conference days)





Egyptian cuisine offers a wealth of delicacies. Below is a brief selection of the most famous Egyptian dishes you might want to try during your visit.

 Ful Medammes and Tamiya: Breakfast of slow cooked mashed fava beans (ful medammes) and fava bean fritters (Tamiya)



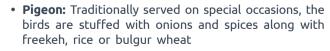
Koshari: A hearty meal made with lentil rice, pasta, chickpeas, vinegar tomato sauce, and topped with crispy thin fried onion rings







• Mulukhiyah: Soup made from mallow leaves







Baba Ganoush: Cream of roasted eggplant, olive oil, garlic, sesame paste (tahini) and lemon, very similar in texture to hummus

 Mahshi: Baked vegetables, usually peppers, zucchini or aubergine, stuffed with rice mixed with aromatic herbs





- Alexandrian Kebdah: Fried beef liver with spicy seasonings such as cumin, garlic, cardamom, and chili peppers.
- Sayadiyah Fish: Seasoned fish and rice dish
- **Hawawshi:** Crispy pita bread stuffed with minced meat, onions and spices.





- Baked sweet potato: Street vendors roast the sweet potatoes in their portable wood-burning ovens
- Feteer Meshaltet: A light, flaky multilayered bread made from paper-thin dough folded several times. It is served stuffed with minced meat or cheese or just plain brushed with ghee or dusted with icing sugar.
- Kanafeh: A dessert made of shredded filo dough crust with a sweet cheese filling, topped with a rose water flavored syrup
- Umm Ali: Egyptian bread pudding
- Basbousa: Sweet semolina cake



Drinks

• Egypt is well known for its **sugarcane juice**, **mango and other fresh fruit juices**, **and traditional Egyptian tea with mint**.



HELPFUL ARABIC WORDS AND CONTACTS

ENGLISH	ARABIC		
Hello	Al Salamo alaikom		
Good morning	Sabah El Fol		
Good evening	Masaa El Fol		
What's your name?	Ismak aih?		
My name is	Ana esmi		
How are you?	Ezayak		
Have a nice day	Yomak Saeed		
Thank you	Shokran		
Where is the bathroom?	Fain el hammam?		
Please	Laow Samaht		
Very nice	Helw awi		
Cool!	Eshta!		
My Arabic is poor	Ana mesh bafham Arabi kwayyes		
Help me	Sa-edni		
Sorry	Asef / Maalesh		
Epidemic Intelligence from Open Sources	Gamae El Malomat El Wabaeeya men el masader El maftooha		





Emergency contact list

Tourist police	126
Medical Emergency: Ambulance	123
Fire Emergency	180

Contacts for GTM organizing team

Heidi Ghanem (organization)	+ 20 100 567 9364	
Weeam El Metenawy	+20 0128 126 4217 (calls)	
(administration)	+20 0100 9140221 (WhatsApp)	





Dr Agnes Molnar Acting Head of UnitEuropean Commission, Health Emergency

Preparedness and Response Authority (HERA)

Dr Agnes Molnar is the Lead of the Unit on intelligence gathering, analysis and innovation at the Health Emergency Preparedness and Response Authority. She joined the European Commission in 2014 and has worked on social and environmental determinants of health, preparedness and response to serious cross-border health threats and global health security. Dr. Molnar holds degrees in medicine and in law, as well as a PhD in the health sciences field of public health and preventive medicine. She pursued post-doctoral research in health policy and systems and health impact assessment.



Dr Ahmed Al-Mandhari Regional Directorof the World Health Organization's Regional Office for the Eastern Mediterranean (EMRO)

Dr Ahmed Al-Mandhari was appointed as WHO Regional Director for the Eastern Mediterranean by WHO's Executive Board at its 143rd session and assumed office on 1 June 2018. A native of Oman, Dr Al-Mandhari has made a substantial, positive contribution to the development and modernization of Oman's health system, which has witnessed qualitative improvements in recent years, particularly in areas such as patient safety. A specialist in family and community medicine, Dr Al Mandhari was Head of Quality Management and Development at Sultan Qaboos University Hospital from 2005 to 2006, followed by Deputy Director-General for Clinical Affairs until 2010. In 2013, he was appointed Director-General of Sultan Qaboos University Hospital, later becoming Director-General of the Quality Assurance Centre at the Ministry of Health. Dr Al-Mandhari has also worked as a senior consultant in family medicine and public health in Oman since 2009.



Dr Albert Ty **Deputy Director** Ministry of Health, Singapore

Dr. Albert Ty is the Deputy Director of the Epidemiology and Disease Control Division (Public Health Group) in the Ministry of Health, Singapore. Dr. Ty is a neurologist and public health specialist by training. He currently heads the Ministry's Public Health Intelligence Branch monitoring and accessing global health developments and is also the IHR National Focal Point. Concurrently, he heads the non-communicable diseases branch that develops national policies on preventive health and health promotion services. Dr. Ty's particular area of focus is emerging infectious conditions that may pose a public health threat to Singapore.



Dr Amrish Baidioe Director Médecins Sans Frontières

Dr Amrish Baidjoe is the director of the operational research and epidemiology Unit (LuxOR) in MSF (OCB). He is a trained field-epidemiologist and microbiologist, and holds an honorary assistant professorship at the London School of Hygiene and Tropical Medicine in the department of infectious disease epidemiology. He has extensive work experience in the arena of humanitarian health emergencies with ICRC, WHO, Institute Pasteur and Imperial College London.



Prof Ana Bento Science Director Rockefeller Foundation

Ana Bento is an infectious diseases eco-epidemiologist and the Director of Science at the Rockefeller Foundation's Pandemic Prevention Institute. In this capacity, she is leading a team of transdisciplinary researchers to shape, develop and coordinate integrative research into how data-driven modelling can end current and prevent future pandemics. Outside of The Rockefeller Foundation, she also is currently a Professor of Epidemiology at Indiana University – Bloomington. In her research, she leverages mathematical and computational modelling, machine learning, and data science to identify the eco-evolutionary, demographic, and environmental drivers of pathogen emergence, persistence, and spread. She holds a PhD in Ecology and Evolution from Imperial College London, UK.



Dr Andrea AmmonDirector

European Centre for Disease Prevention and Control

Dr Andrea Ammon was appointed Director of ECDC in 2017. Prior to that, she was the Deputy to the Director and Head of the Unit for Resource Management and Coordination, where in May 2015, she was ECDC's Acting Director. Dr. Ammon joined ECDC as the Head of the Surveillance Unit in 2005. Her unit was responsible for developing The European Surveillance System (TESSy), implementing a long-term surveillance strategy for the European Union (EU), evaluating the Dedicated Surveillance Networks (DSN), performing step-by-step transfer of DSN activities to ECDC, revising the EU case definitions, and producing an Annual Epidemiological Report on infectious diseases in the EU. Before joining the ECDC, Dr Ammon served in several roles at the Robert Koch-Institute, in Berlin, Germany, most recently as Head of Department for Infectious Disease Epidemiology. In this capacity, she maintained and further developed the German national surveillance system; coordinated the national outbreak response team for current and emerging infections; coordinated emergency planning for influenza; directed the national Field Epidemiology Training Programme; coordinated epidemiological research programmes in infectious diseases and provided scientific advice for government Ministries, Members of Parliament, and the public.



Dr Andrea Capobianco Dondona Global Early Warning System CoordinatorFood and Agriculture Organization of the United Nations

Andrea Capobianco Dondona is a veterinary epidemiologist with over 16 years of experience as a wildlife veterinarian both, working in both diagnostic laboratories as well as in the field. He currently works as the Global Early Warning System Coordinator for FAO in the NSAH Emergency Prevention System for Animal Health unit within the Animal Production and Health Division. Andrea leads early warning and disease intelligence activities through disease monitoring, analysis and forecasting to ensure early warning and early action for transboundary disease threats. Over the years he has gained considerable experience in the design, development and management of health information systems including the application of new technologies, such as artificial intelligence, to the One Health sector.



Dr Andreas Jansen Head Information Center for International Health Protection, Robert Koch Institute

Dr. Andreas Jansen is the Head of the Information Center for International Health Protection (INIG) at the Robert Koch Institute in Berlin. He is a trained MD with a postgraduate degree in the field of epidemiology (EPIET), a diploma in Tropical and Travel Medicine, and holds board certification in epidemiology. Dr. Jansen has worked at WHO at Headquarters in Geneva, where as part of the GOARN operation support team, his main task was to coordinate the work on Rapid Response Capacities. He also has experience as Head of Section for Scientific Advice Coordination at the European Centre for Disease Prevention and Control in Stockholm where he was responsible for developing and implementing SOPs and workflows for scientific advice, including IT implementation. In addition, Dr. Andreas has experience as a member of public health emergency response teams (pandemic influenza, O fever, EHEC) both at the national and international level. He has extensive experience in outbreak response and has been the principal investigator in several outbreak investigations.



Dr Andrew Nerlinger **Executive Director** Global Health Security Fund

Dr. Andrew Nerlinger is a physician, investor, and social entrepreneur. He serves as the Executive Director of the Global Health Security Fund, a Geneva-based nonprofit that supports impact investment in health security innovation. Andrew is also the Co-Founder and Director of PandemicTech, an Austin-based company formed in 2016 that invests in and supports the growth of global health security startups. Dr. Nerlinger is a Venture Partner at Bill Wood Ventures, an Austin-based venture capital firm, and was previously a Partner at Vesalius Ventures, a Houston-based venture capital firm. Andrew is a graduate of the Yale University School of Medicine and the University of Notre Dame.



Bhola Prasad Roka Statistics Officer Department of Health Services, Ministry of Health and Population Nepal

Bhola Prasad Roka is from Nepal, working in the in the Epidemiology and Disease Control Division" at the Nepal Ministry of Health and Population. He has been engaged in health sector since 2001. He has keen desire to work with health statistics including demographic information. Besides Bhola Prasad Roka has deep interest in EIOS which will make robust management in epidemiology outbreak and its mitigation in Nepal.



Dr Boniface Dulani Director of Surveys Afroharometer

Boniface Dulani holds a Ph.D. in Comparative Politics with a minor in International Relations from Michigan State University (MSU), USA, obtained in 2011. Boniface Dulani joined Afrobarometer in 2008 as a graduate research assistant while undertaking his doctoral studies. In 2013, he was appointed Afrobarometer's Operations Manager for Fieldwork and oversaw the fielding of surveys across the African continent. He served in this capacity until 2020 when he was appointed Director of Survey. In addition to Afrobarometer, Boni is an Associate Professor of Political Science at the University of Malawi and a Visiting Researcher at the Centre for Social Science Research, University of Cape Town, South Africa. In addition to MSU, Boniface has studied at York and Sussex universities in the UK. He is a member of several professional bodies, including the African Association of Political Science, the American Political Science Association, the African Studies Association, and the Malawi Political Science Association. Boniface has published and consulted widely on African politics, focusing mostly on Democracy and Governance; Political Economy Analysis, local development; education; public health; youth; participation of women in politics, to give but a few examples.



Brian Doherty Project Manager Joint Research Centre of the European Commission

Brian Doherty has been a project manager for the technical development of the EIOS system within the JRC since 2015. During this time he was also active in the Crisis Management and Response unit of DG SANTE. He has a background in IT development and Project Management and is currently in the Text and Data-Mining unit of the JRC and in the management team of the Situational Awareness portfolio.



Charlotte Hicks Senior Technical Officer Nature-based Solutions United Nations Environment Programme World Conservation Monitoring Centre

Charlotte Hicks has experience at UNEP-WCMC where her role involved supporting government and civil society partners in decision making on biodiversity, climate change, and nature and health. She was also active in the planning, design and monitoring of ecosystem-based mitigation and ecosystem-based adaptation, and environmental and social safeguards. She coordinates UNEP-WCMC's Nature for Health and Wellbeing focal initiative, which consists of exploring relationships between nature and people, and using approaches such as One Health and nature-based solutions.

























Dr Chikwe Ihekweazu Assistant Director-GeneralWorld Health Organization

Dr. Chikwe Ihekweazu is the Assistant Director General at the World Health Organization (WHO) for Surveillance and Health Emergency Intelligence and leads the WHO Hub for Pandemic and Epidemic Intelligence, based in Berlin, Germany. Dr. Ihekweazu was the first Director General of the Nigeria Centre for Disease Control (NCDC), which he led from 2016 to 2021, building it from a small unit to a leading public health agency in Africa, He acted as Interim Director of the West Africa Regional Centre for Surveillance and Disease Control through 2017. He is a trained infectious disease epidemiologist with over 25 years' experience working in senior public health and leadership positions in national public health institutes including NCDC, South African National Institute for Communicable Diseases, the UK's Health Protection Agency, and Germany's Robert Koch Institute. Dr. Ihekweazu has led several short-term engagements for WHO, mainly building surveillance systems and responding to major infectious disease outbreaks. He was part of the first WHO COVID19international mission to China. Dr. Ihekweazu graduated from the College of Medicine, University of Nigeria and has a Masters in Public Health from the Heinrich-Heine University, Dusseldorf, Germany. He has over one hundred publications in medical peer review journals, mostly focused on the epidemiology of infectious diseases. Dr Ihekweazu is on the board of multiple NGOs. He was a TED Fellow and co-founded and delivered the TEDxEuston event from 2009 to 2019.



Claudia Carella

Project Manager

Italian National Transplant Centre National Institute of Health, Italy

Claudia Carella obtained her Master's degree in Foreign Relation (Università degli Studi di Bari) in 2009. In 2010, she started work as a project assistant in the Italian National Institute of Health, Italian National Transplant Centre in the framework of the project: "Coordination and control activities of tissues and cell establishments, including assisted reproduction centers in the light of the implementation of Italian Decree n. 1997/191 and n.16 of 25.1.2010". As an expert in the Italian National Transplant Centre she participated in the meeting of the Council of Europe Committee on Organ Transplantation (CD-P-TO). In 2011 she took part in the organizing committee of WHO/CHT/SOHOV&S meeting on "Vigilance and Surveillance of substances of Human Origin: project NOTIFY" held in Bologna. Since March 2015, she has been the project assistant for the Notify Library, WHO global initiative project of vigilance and surveillance of blood, organs, tissues and cells.



Dr Daniel Faktaufon Senior Medical OfficerCentre for Disease Control

Ministry of Health and Medical Services, Fiji

Dr Daniel Faktaufon worked with Fiji's Ministry for Health and Medical Services (MoHMS) for over 10 years. As a medical practitioner, he completed an internship program at the CWM Hospital in 2011. In 2012 he was posted to Rotuma Hospital a position he held for 2 years and in 2014, he transferred to Korovou Hospital where he was again charged with the overall clinical and administrative duties in the subdivision. In 2016, he joined the Fiji Centre for Disease Control (Fiji CDC); a department within the Ministry responsible for controlling the spread of infectious diseases. This is a position he held from 2016 to the present day where he is currently the Principal Medical Officer for Fiji CDC. He has been involved in the establishment and implementation of the Early Warning Alert and Response System ('EWARS'), contributed to the review of Fiji's CD Surveillance and Outbreak Response Guidelines, Clinical Guidelines for diagnosis and Management of Leptospirosis, the Fiji Measles Public Health Management Guidelines. He has also been heavily involved in CD outbreak investigations and conducting capacity building on outbreak investigation and response for health workers in the country



ProfessorMcGill University

Dr. David Buckeridge is a Professor in the School of Population and Global Health at McGill University in Montreal where he directs the Surveillance Lab, an interdisciplinary group that develops, implements, and evaluates novel computational methods for population health surveillance. He is the Chief Digital Health Officer at the McGill University Health Center, directing strategy on digital transformation and analytics. His research and practice focus on the informatics of health surveillance and disease control and he holds a Canada Research Chair (Tier 1) in Health Informatics and Data Science. In the context of the COVID19-pandemic, Dr. Buckeridge provides regular projections of health system demand for the Canadian province of Quebec, is the Scientific lead for Data Management and Analytics for the Canadian Immunity Task Force and monitors global immunity to SARS-CoV2-. He is also a technical advisor to the WHO Epidemic Intelligence from Open Sources (EIOS) program on the application of artificial intelligence to global infectious disease surveillance. Dr Buckeridge has a MD from Queen's University, a MSc in Epidemiology from the University of Toronto, a PhD in Biomedical informatics from Stanford University, and is a Fellow of the Royal College of Physicians of Canada.



Dirk Brockmann Professor of BiologyHumboldt University Berlin,

Computational Epidemiology at Robert Koch Institute

Dirk Brockmann is a Professor in the Department of Biology at Humboldt University of Berlin. He also heads the project group Computational Epidemiology at the Robert Koch-Institute. Before his appointments in Berlin, he was Professor in the Department of Applied Mathematics and the Northwestern Institute on Complex Systems (NICO) at Northwestern University in Chicago. A theoretical physicist by training, Professor Brockmann has had 20 vears of interdisciplinary research experience working on fields as diverse as neuroscience. network science, infectious disease dynamics and collective behavior in human and animal populations. In his research, Professor Brockmann and his team approach complex phenomena on the interface of life sciences, social sciences and medical sciences using an integrative approach of computational methods, network science and data science. Professor Brockmann was among the first scientists that developed computational models for the global spread of infectious diseases on the worldwide air transportation network. He has been applying global modelling approaches in the context of SARS 2003, the 2009 influenza pandemic, and, naturally during the past two years in the context of the COVID19crisis. Professor Brockmann believes in the values and benefits of transdisciplinary attitudes in science, the intentional breach of borders between traditional scientific disciplines.



Eloise Todd Executive Director & Co FounderPandemic Action Network

Eloise Todd is the executive director and a co-founder of the Pandemic Action Network. Eloise is an advocacy, policy, campaigns, and strategy specialist with 20 years' experience working to change policies, legislation and budgets with the goal of improving lives. Primarily, she has worked in international development, including as a political adviser on development issues within EU institutions and running international advocacy and global policy at the ONE Campaign. Eloise campaigned against the UK's Brexit deal, building one of the largest pro-European organizations into a national campaign force. She is known for achieving ambitious policy changes, including: leading the effort to oblige gas, oil, and mining companies to publish what they pay governments, helping raise millions in additional government funding for GAVI and the Global Fund, and advocating for increased aid budgets.



Dusan Milovanovic Solution Architect (Technology)World Health Organization

During his 27 years of professional career, acting in product management, systems engineering and architecture roles, Dusan Milovanovic was engaged in the research and development of disruptive information and communication technologies. His curriculum includes a technology leadership career at Ericsson, then engagements within life science, healthcare, and public health domains. At the World Health Organization, he acts as a technology expert and a health intelligence architect within the core team of the Epidemic Intelligence from Open Sources initiative. Dusan Milovanovic inspired and secured acceptance for creation of three Hub's prime-mover initiatives – Knowledge Representation and Reasoning for Public Health Intelligence, Laboratory for Collaborative Intelligence, and the Open-Source Program Office. Dusan has BSc in Electrical Engineering, including Computer Science and Telecommunications.



Dr Evangelia Petrisli Medical DoctorMicrobiology Unit, IRCCS Azienda OspedalieroUniversitaria di Bologna

Dr. Evangelia Petrisli obtained her Degree in Medicine and Surgery and her Postgraduate Specialization in Microbiology and Virology at the University of Bologna, Italy. Since 2006 she has conducted diagnostic activity in the Operative Unit of Clinical Microbiology of Sant'Orsola – IRCSS Malpighi University Polyclinic of Bologna. This scientific research is dedicated to the study of immunity in groups of patients at particular risk of infectious complications, mainly solid organ and hematopoietic stem cell transplant recipients, and the study of new standards for the prevention, diagnosis, prognosis and therapy of congenital CMV infection. Dr. Petrisli is the scientific coordinator of "HLA-G as Prognostic Marker for Cytomegalovirus Infection and Clinically Relevant Heart Allograft Outcomes" for the Operative Unit of Clinical Microbiology. She has been a NOTIFY Project collaborator since 2013 for the Italian National Transplant Centre. Her main activities focus on the open access database NOTIFY Library, part of an international effort to promote the sharing of vigilance information for didactic purposes in the field of clinical application of Medical Products of Human Origin (MPHO) in cell, tissue and organ transplantation, in medically assisted reproduction.



Florence Tanguay GPHIN ManagerPublic Health Agency of Canada

Florence Tanguay is an epidemiologist with over 15 years of experience in communicable disease surveillance and outbreak response. Florence is a graduate of the Canadian Field Epidemiology Program and joined the Public Health Agency of Canada in 2009. In 2019, she joined the Global Public Health Intelligence Network (GPHIN) as the senior epidemiologist providing situational awareness and risk assessment on issues of public health importance domestically and globally. She took over the management of GPHIN in September 2020. She provides strategic direction and manages the day-to-day operations of a team of multilingual and multicultural analysts and epidemiologists.



Dr Gianfranco Spiteri Principal Expert Epidemic IntelligenceEuropean Centre for Disease Prevention and Control

Dr Gianfranco Spiteri (MD, MSc Public Health) joined the ECDC in 2010 and is currently the Group Lead of the Epidemic Intelligence group in the Surveillance Section. While at ECDC, he has contributed to the surveillance of several infectious diseases, including sexually transmitted infections, vaccine preventable infections and emerging diseases (such as Ebola virus disease and Zika). In 2020 and 2021 Dr Spiteri coordinated ECDC surveillance work related to the COVID19- pandemic, before joining the Epidemic Intelligence team as Group Lead in December 2021. He trained as a Medical Doctor in Malta where he is a registered Public Health Specialist. Dr Spiteri is an alumnus of the European Programme for Intervention Epidemiology Training.



Haja Fatmata Bangura Event-Base Surveillance AnalystMinistry of Health and Sanitation, Sierra Leone (Jhpiego)

Haja Fatmata Bangura, is a graduate of Njala University Bo campus, and is presently pursuing Master's in public health (MPH). She is an event-based surveillance (EBS) analyst with the Ministry of Health and Sanitation/Jhpiego in Freetown, Sierra Leone. She is responsible for tracking information from websites, rumors, mass media and social media on diseases and events of high public health concern. This information is shared with the Director of the Directorate of Health Security and Emergencies, Partners (WHO, US CDC, Africa CDC, AFFENET and Jhpiego) for policy planning and public health action. She is also a data analyst and is involved with the weekly epidemiological Integrated Disease Surveillance Update and the production of the national epidemiological weekly bulletin team. Haja is also a national mentor for the quarterly on data quality audit assigned to the Northern province (Bombali, Tonkolili, Falaba and Kabala).



Ibrahim Mahgoub Program Director Epidemic Preparedness and Response, Data.org

Ibrahim Mahgoub has over 10 years of experience in accelerating open innovation in the public and private sectors. He is the Program Director of Epiverse; a data.org initiative that supports open and privacy-preserving data analytics tools for pandemic preparedness and response. Prior to joining data.org, Ibrahim led UNICEF's pathfinding initiative supporting 10 governments in leveraging open software and open data to strengthen public services. In addition to advocating for Digital Public Goods among the agencies of the United Nations and government leaders, he has piloted new approaches to scaling innovations in the fields of Vaccine Delivery and WASH. Ibrahim has also designed and implemented new partnership models to accelerate UNICEF's innovation work in the MENA region. Mahqoub is a firm believer in the power of open technology and collaboration to transform the public and humanitarian sectors. He holds a master's degree in digital transformation and innovation leadership from IE Business School.



Dr Janaina Sallas General Coordinator Ministry of Health

Janaina Sallas holds a Ph.D. in Public Health from the University of Brasília and the Université Paris 13 through the COFECUB/CAPES Program. Dr. Salas received her Masters in Health Sciences and Technology from the Faculty of Ceilândia, UnB. And has over 20 years of experience in public health. From 2020 to August 2022, she was the General Coordinator of Public Health Emergencies in the Department of Environmental Surveillance, Occupational Health and Public Health Emergencies of the Health Surveillance Secretariat of the Ministry of Health. Here she supported the implementation and strengthening of responses to public health emergencies. Since September 2022, Dr. Sallas has been the General Coordinator of the Center for Strategic Information in Health Surveillance (GCIEVS) with the Department of Public Health Emergency, Health Surveillance Secretariat, and Ministry of Health in the implementation and strengthening of early warning detection (EWD), Public Health Intelligence (PHI), Event-based surveillance (EBS), and risk assessment. She is tasked with supporting the response of public health events and public health emergencies, including those in the hospital environment.























Dr Jenny Hutchison HeadWorld Organisation for Animal Health

Dr Jenny Hutchison is an experienced veterinary epidemiologist with an extensive background in data and information management systems. She has been with the World Organisation for Animal Health at its Paris headquarters for almost three years, first as Deputy Head of the Science Department, and now as Head of the World Animal Health Information and Analysis Department. She has extensive experience with government, international organisations, private industry, and academia, and, as a consultant, has worked in more than fifteen countries across Asia, Africa, the Americas and Europe.



Dr Johannes Schnitzler Medical OfficerWorld Health Organization

Dr Johannes Schnitzler is a Medical Doctor, Epidemiologist and Master of Science in Medical Informatics working at the Department for Pandemic and Epidemic Intelligence Systems. Johannes is working on systems and tools supporting public health intelligence activities and is currently focusing on the coordination of the development and enhancement of the EIOS system. Johannes has been with WHO since 2003 working on the evaluation, development and implementation of surveillance systems with a focus on rapid detection, automated analysis and reporting. He has supported for many years public health intelligence activities at global level including threat detection, risk assessment, verification and rapid communications and has participated in the response to several large-scale outbreaks and pandemics. Johannes graduated from Charité medical school, did his field epidemiology training (EPIET/FETP) at the Robert Koch Institute in Berlin and studied medical informatics at the Beuth University of Applied Sciences in Berlin.



John Sung Jin Lee Consultant - Strategic Advisor World Health Organization

Mr. John, Sung Jin Lee is the Strategic Advisor to the WHO's community centered Epidemic and Pandemic Information platform, HIVE. He is a Strategic Advisor to the Australia Korea Business Council, Health & Biotechnology subcommittee. Mr. Lee is an Engineer B.Eng. (from The University of Sydney) by training and a Health and Biotechnology commercialization executive. He gained his skillset and experience through project leadership, strategy, product commercialization, and corporate governance. Prior to joining the team at Epidemic & Pandemic Preparedness & Prevention, Health Emergencies Programme at WHO this year, John Lee was the Chief Commercial Officer at Bioscience Equity Partners where he successfully established an international investment banking group focusing on Health & Biotechnology. Between 2019 and 2022, he was the Director of a private equity firm, The IQ Group, and led the Health & Biotechnology accelerator PMO function. During the earlier phase of the COVID19- pandemic, the team developed a saliva-based test that accurately detects the presence of antibodies to SARS-CoV2- from small saliva samples in collaboration with Johns Hopkins Bloomberg School of Public Health and The Wyss Institute, Harvard University.



Dr Joy St John **Executive Director** Caribbean Public Health Agency (CARPHA)

Dr. Joy St John rose in the ranks of Public Health in Barbados from 1994 to become the first Barbadian Chief Medical Officer of Barbados in 2005. She represented Barbados on the Executive Board of WHO, becoming the first Caribbean chairperson of the Executive Board in 2013-2012. In 2017 she became Assistant Director General at the WHO HQ in Switzerland. She held the Portfolio of Climate and Other Determinants of Health and completed the first phase of the Climate Change and Health SIDS Initiative. In 2019 she became Executive Director of the Caribbean Public Health Agency. CARPHA led the CARICOM regional public health response to the COVID19- pandemic. Her leadership has seen her engaged in COVID19- with several sectors in and outside of CARICOM.























Dr Julia Fitzner EpidemiologistWorld Health Organization

Dr. Julia Fitzner is a Medical Doctor and Epidemiologist working in the Department for Pandemic and Epidemic Intelligence Systems in Berlin as an Epidemiologist in the Information System Unit. Dr. Fitzner's work has focused extensively on enabling data reporting and analysis from different sources, covering the cycle of defining surveillance objectives, data collection, data harmonization, analysis, and reporting through different dashboards and reports. Currently, she is focusing on setting up the Collaboratory for pandemic and epidemic intelligence in the WHO pandemic Hub. Dr. Fitzner has been with WHO since 2001 working in different areas focusing on global surveillance, data collection, and analysis. Her primary work areas have been seasonal and pandemic influenza, influenza at the human-animal interface, COVID19-, integrated disease surveillance, and adverse events after immunization. She has also been involved in several crisis responses, including yellow fever outbreaks, SARS, the 2009 influenza pandemic, COVID19- pandemic, and the recent Monkeypox outbreak. Julia graduated from Charité medical school and did her field epidemiology training (EPIET/FETP) at the Robert Koch Institute in Berlin.



Karl Schenkel EpidemiologistWorld Health Organization

Karl Schenkel is a medical epidemiologist working for the new surveillance systems department of the WHO Emergencies Program in Geneva. His tasks are related to health information management in emergencies, including the development of a global WHO surveillance strategy, developing technical guidance for Early Warning and Response, surveillance systems evaluation and data sharing, and strengthening the health workforce for surveillance and epidemiology. Together with the Tripartite Organizations, he is coordinating a three-year project with the objective to develop multisectoral Tripartite One Health field epidemiology competencies and curriculum guidance at the human-animal-environmental interface. Further activities in the field of One Health include a Quadripartite One Health Intelligence Scoping study. He trained as a medical doctor, and after clinical specialization as a GP conducted a master study on International Health focusing on communicable disease epidemiology and control. Karl Schenkel has worked as a research fellow in communicable diseases epidemiology at the Robert Koch Institute (RKI), Berlin, Germany, including a -2year applied field epidemiology training program. He joined the WHO in 2016.



Dr Krzysztof Janowicz Professor University Vienna and University of California, Santa

Dr Krzysztof Janowicz is a professor of Geoinformatics at the University of Vienna and University of California, Santa Barbara. He is the Director of the Center for Spatial Studies, University of California, Santa Barbara.



Kyeng Mercy Tetuh Event Based Surveillance Coordinator Africa Centres for Disease Control and Prevention

Kyeng Mercy Tetuh is an Epidemiologist with over ten years of experience at the national, regional, and continental levels strengthening health systems in detecting and responding promptly to public health threats. She currently leads the Event-Based Surveillance (EBS) program of the Africa CDC, which is supporting the establishment of early warning systems to improve early detection and reporting of public health threats. Her work involves building capacity for MS on EBS, establishing regional EBS communities and leading the development of event management systems for the capture, analysis, retrieval, and reporting of both structured and unstructured data for Africa CDC and African Union (AU) Member States.



Leo Wolansky Director of Data Strategy and Products Pandemic Prevention Initiative. The Rockefeller Foundation

Leo Wolansky is a data product leader, bridging disciplines to deliver modern data and analytics solutions to social and organizational problems. He has spent much of his career at the nexus of product management, research, data, and analytics; first in the fields of politics and business, and now in health. As Director of Data Strategy and Products on the Pandemic Prevention Initiative team, Leo leads the development of data products that support pandemic prevention and response. He serves as a connector across science, engineering, and partnerships teams, as well as between PPI and its target users. Upon first joining The Rockefeller Foundation, Leo was the Data Product Manager for its Health Initiative, including its Precision Public Health and COVID-response work – a key role where he identified opportunities to support and leverage digital technologies to strengthen global health systems and improve health outcomes. Formerly, he was the VP of Analytics at Applecart, which built technology to integrate and analyze disparate social, demographic, and psychographic data to guide electoral campaign strategy and targeting.

























Prof Dr Martin Hofmann-Apitius Head of the Department of BioinformaticsFraunhofer Society, Institute for Algorithms and Scientific Computing (SCAI)

Dr. Martin Hofmann-Apitius holds a PhD in Molecular Biology and worked for more than 10 years in experimental molecular biology. The screening for novel genes involved in tumor metastasis lead him into the area of functional genomics and subsequently to applied bioinformatics. Dr. Hofmann-Apitius has experience in multiple areas including academic research (University of Heidelberg (ZMBH), Forschungszentrum Karlsruhe (ITG), German Cancer Research Center (DKFZ) and industrial (BASF, Boehringer Ingelheim, LION bioscience AG) research. Since 2002 he has led the Department of Bioinformatics at the Fraunhofer Institute for Algorithms and Scientific Computing in Sankt Augustin, Germany, a governmental non-profit research institute. In July 2006 he has been appointed as a Professor for Applied Life Science Informatics at Bonn-Aachen International Center for Information Technology (B-IT). He is (co-) author of more than 200 peer-reviewed, scientific publications. His work focuses on information extraction (text mining) in biomedicine; biomedical semantics and data integration, and knowledge-based modeling of disease. In the field of global public health, Martin Hofmann-Apitius and his team have developed pipelines for rapid data- and knowledge-landscaping. His team is also working in FAIR data, integrative data semantics and advanced AI methods that integrate a-priori knowledge through the integration of cause-and-effect graphs.



Dr Masaya Kato Programme Area ManagerWHO Regional Office for South-East Asia (SERO)

Dr Masaya Kato has been working with countries in Asia to strengthen infectious disease surveillance, preparedness and response over the past 20 years. At present, Dr Kato works with the Health Emergencies Programme at WHO Regional Office for South-East Asia (SEARO) and coordinates the team of Health Emergency Information and Risk Assessment. He is promoting the framework, connecting surveillance, risk assessment and field epidemiology in the region.



Dr Mike Ryan Executive DirectorWorld Health Organization

Dr Mike Ryan has been at the forefront of managing acute risks to global health for nearly 25 years. He served as Assistant Director-General for Emergency Preparedness and Response in WHO's Health Emergencies Programme from 2017 to 2019. Dr Ryan first joined WHO in 1996, with the newly established unit to respond to emerging and epidemic disease threats. He has worked in conflict affected countries and led many responses to high impact epidemics. He is a founding member of the Global Outbreak Alert and Response Network (GOARN), which has aided the response to hundreds of disease outbreaks around the world. He served as Coordinator of Epidemic Response (2003-2000), Operational Coordinator of WHO's response to the SARS outbreak (2003), and as WHO's Director of Global Alert and Response (2011-2005), He was a Senior Advisor on Polio Eradication for the Global Polio Eradication Initiative from 2013 to 2017, deploying to countries in the Middle East. He completed medical training at the National University of Ireland, Galway, a Master's in Public Health at University College Dublin, and specialist training in communicable disease control at the Health Protection Agency in London and the European Programme for Intervention Epidemiology Training.



Dr Mohammed Abdulaziz Head of DivisionAfrica Centres for Disease Control and Prevention

Dr. Mohammed Abdulaziz is the Head of Division for Disease control and Prevention at Africa Centre's for Disease Control and Prevention, African Union commission, based in Addis Ababa, Ethiopia. He is the co-chair for the Infection Prevention and Control Technical Working Group for Africa CDC's continental response to COVID19- and leads the Country Engagement work stream of Africa CDC's Saving Life and Livelihood program for delivery of COVID19- across the continent. He is a medical doctor and has a Master's in public health. He is a fellow of the West African College of Physicians where he rose to the position of Chief Consultant Physician before Joining Africa CDC. Dr. Mohammed is also a fellow of the Chatham house Africa Leadership program in Public Health. Before his current appointment, he previously served as the Principal Medical Epidemiologist in Africa CDC where he was the program coordinator for the first regional initiative to strengthen public Health in Africa. Dr Mohammed has over 40 peer reviewed scientific publications.



Dr Nada Ghosn Head of the Epidemiological Surveillance Program (Esumoh)Ministry of Public Health, Lebanon

Dr Nada Ghosn has been Head of the Epidemiological Surveillance Program (Esumoh) at the Lebanese Ministry of Public Health since July 2000. She has worked to enhance communicable diseases surveillance system, building national capacity for disease surveillance and outbreak investigation. In 2007, she worked to integrate the National Cancer Registry within Esumoh. She has also contributed to the Mediterranean programme for Intervention Epidemiology Training (MediPIET), in which Esumoh is designated as a MediPIET training site. From 2004 to 2015, she contributed to various WHO missions including training, review, and GOARN. Nada Ghosn is leading the national team in charge of COVID19- surveillance and investigation, including contact tracing, and generating the national daily COVID19- surveillance report. As of 2022, she has also been leading the surveillance investigation of the Cholera outbreak in Lebanon. In Oct 2022, she was awarded the Lebanese second class of the Order of Merit for her contribution to COVID19-surveillance and control. She is lecturer at Lebanese University, Faculty of Public Health.



Dr Naif Alharbi DirectorGulf Center for Disease Prevention and Control

Dr Naif Khalaf has just joined the Gulf CDC as the Director, Public Health Emergencies. Previously he was conducting his research in the field of Infectious Diseases and vaccine development between King Abdullah International Medical Research Center Research and the University of Oxford. He was focusing on studying viruses that are of health importance nationally (in Saudi Arabia) with global impact, including MERS-CoV immunology and vaccine development for camels and humans. He holds a Ph.D. in Molecular Virology and Vaccinology from the University of Oxford with background degrees in Medical Microbiology.



Nomita Divi Executive DirectorEnding Pandemics

Nomita Divi is Executive Director at Ending Pandemics. She oversees the strategy and workplan implementation at Ending Pandemics. Nomita brings expertise in stakeholder engagement, management, needs assessment, and strategic planning. Nomita has coordinated various projects including the development of a network in South Asia, crowdsourcing epidemics intelligence through EpiCore, and enhancements in Event Based Surveillance in five countries. At Stanford, she managed health-policy programs and a student fellowship to identify ground realities that impact health seeking behavior in India. Before Stanford, she worked at Massachusetts General Hospital, managing the application of a HIV simulation model in India, South Africa, Cote d'Ivoire, and the Caribbean.



Dr Oliver MorganDirector

World Health Organization

Dr. Oliver Morgan is the Director of the Pandemic and Epidemic Intelligence Systems at the WHO Hub for Pandemic and Epidemic Intelligence, based in Berlin, Germany. From 2007 through 2016. Dr. Morgan worked for the US Centers for Disease Control and Prevention during which time he held critical leadership positions in the Ebola response between November 2014 and February 2016 (CDC Atlanta Ebola Response Incident Manger and CDC Country Director in Sierra Leone). From March 2010 to October 2014, he was the CDC Country Director in the Dominican Republic. Dr. Morgan was an Epidemic Intelligence Service Officer at CDC from 2007 to 2009 with the International Emerging Infections Program, during which time he conducted projects in Thailand, Bangladesh, Kenya, Uganda, and Guatemala. Before joining CDC, he worked for the UK Health Protection Agency, leading epidemiological investigations of outbreaks (enteric, vaccine preventable, hospital acquired, zoonotic, respiratory, and sexually acquired infections), chemical and radiation exposure incidents, terrorist bombings in London, natural disasters, and humanitarian civil conflicts. Dr. Morgan has also worked as a consultant to WHO/PAHO in several countries. Dr. Morgan's academic achievements include a doctorate in epidemiology from Imperial College London and extensive publication in peer reviewed journals and reference books.























Dr Onicio Leal Neto Digital Innovation SpecialistEnding Pandemics

Dr Onicio Leal-Neto brings 13 years of experience in digital epidemiology and technologies applied to disease surveillance. He leads Global Flu View, a digital ecosystem of global ILI activity supported by Ending Pandemics. He has worked for local governments in Brazil and as a consultant for several international organizations including Pan-American Health Organization, UNICEF, and Inter-American Development Bank. He led Participatory Disease Surveillance projects during the 2014 FIFA World Cup and 2016 Olympics and co-hosted additional events including Epicrowd and Epihack Rio. During the COVID19- pandemic, he was the chairman of Brazil Sem Corona, the biggest participatory disease surveillance strategy in Brazil. Dr. Leal-Neto was a project partner of the SURPRISE study, the first participatory disease surveillance approach for healthcare workers in 25 hospitals in Switzerland. He holds a bachelor's degree in Biomedical Sciences, a Master's degree and Ph.D. in Public Health & Epidemiology. He is a senior researcher at the Center for Child Wellbeing & Development – University of Zurich, co-leading wearables and machine learning projects for disease outbreaks and child development.



Dr Paolo Tizzani Veterinary epidemiologistWorld Organisation for Animal Health

Dr. Paolo Tizzani is a veterinarian who holds a degree in parasitology. Until 2015, Dr. Tizzani worked at Turin University (Italy) - Department of Veterinary Sciences, where his research focused on the ecology of diseases in wildlife. From 2015 – 2010, he worked in several EU-funded projects for the control of infectious animal diseases. Dr. Tizzani joined WOAH (World Organisation for Animal Health) headquarter in Paris in 2015, as Veterinary Epidemiologist, where his main activities included epidemiological analysis in relation with world animal health, epidemic intelligence activity to evaluate the sensitivity and quality of international animal disease reporting, and improvement of the quality of health data collected in wildlife. Dr. Tizzani is currently with the WOAH Data Integration Department. He is the author or co-author of over 100 peer-reviewed scientific articles published in international journals.



Patipat (Keng) Susumpow Managing Director Opendream Company Limited

Patipat (Keng) Susumpao is a social entrepreneur, software developer, open data hacker and public health enthusiast. He earned a Bachelor in Computer Engineering in 2004, and is now pursuing a Master of Public Health at Chiang Mai University. He serves as co-founder and product architect at Opendream, a social enterprise for sustainable digital technology development based in Bangkok and Chiang Mai, Thailand. His main interests are in ICT-based personal health care, open-source software development and participatory digital disease detection. He pioneered the idea of disease surveillance through SMS (Short Message Service) in the north-eastern provinces of Thailand in 2009, and development and implementation of the mobile Development of DoctorMe: Thai's first personal health care application for iOS and Android. He also works as the technology team leader for Participatory One health Disease Detection (PODD) in collaboration with Chiang Mai University, open sourcing PODD into a One Health Toolkit for community use.



Dr Philip AbdelMalik Unit HeadWorld Health Organization

Dr Philip AbdelMalik is an epidemiologist and public health informatician, passionate about creative and cross-disciplinary ways to enhance public health practice and capacity. With over 20 years of experience in the health domain, he currently leads and manages an interdisciplinary team within WHO's Health Emergencies Programme, building and strengthening public health intelligence around the globe. This includes the flagship Epidemic Intelligence from Open Sources (EIOS) initiative which is a cornerstone of the WHO Hub for Pandemic and Epidemic Intelligence. Prior to joining WHO, Philip co-directed the Canadian Field Epidemiology Program and worked extensively with the Global Public Health Intelligence Network (GPHIN) at the Public Health Agency of Canada. Philip's work has almost always been in the context of emergency preparedness and response activities, including trying to raise two young adorable children with his lovely wife from down under. Philip holds a PhD in Public Health Informatics awarded jointly by the Universities of Plymouth and Exeter in the UK, as well as a Master of Health Science (MHSc) in Epidemiology and Community Health and an Honours BSc with a specialization in Human Biology, both from the University of Toronto, Canada.



Dr Pierre Nabeth Programme Area ManagerWHO Regional Office for the Eastern Mediterranean (EMRO)

Dr. Pierre Nabeth graduated as a Medical Doctor, specializing in in public health, biostatistics and epidemiology. He started his professional career in the hospital settings and general practice, then holding senior management positions in medical NGOs, and at the Pasteur Institute in Dakar, Senegal. In 2006, Dr. Nabeth joined WHO Headquarters, leading a team aiming to strengthen national surveillance systems. He developed guidance on Early Warning and Event-Based Surveillance, which is used as a reference document. Since 2017, he has led the Health Emergency Information and Risk Assessment Unit of the WHO Health Emergencies Programme in EMRO, charged with strengthening health information management systems in fragile, conflict affected and vulnerable countries. One of the Unit teams which is in charge of strengthening national surveillance systems, with a focus on event-based surveillance is deploying EIOS in the 22 countries of the Eastern-Mediterranean Region. Dr. Nabeth led the development of the regional integrated disease surveillance strategy adopted by EMR Member States in 2021. He has also led the information management pillar in the EMRO incident management support team tasked with coordinating the COVID19- response.



Dr Rabindra Abeyasinghe WHO RepresentativeMalaysia, Brunei Darussalam and Singapore

Dr Rabi Abeyasinghe has worked as OIC/Acting WHO Representative CO Philippines from August 2019, and as a WHO Representative to the Philippines until January 2022. He was acting Director of Health Security and Emergencies at World Health Organizations Regional Office for the Western Pacific (WPRO) based in Manila, Philippines where he, supported the regional response to COVID19-. Prior to joining the Country Office 2019 he was Coordinator of the Malaria and other Vector Borne and Parasitic Diseases at WPRO. He has served WHO since 2011 in various capacities including acting Director Communicable Diseases WPRO, Regional Entomologist (WPRO) and Technical Officer (Malaria in CO Papua New Guinea). Dr. Abeyasinghe received an MD from the University of Colombo, Sri Lanka, and has a MSc in Biology & Control of Disease Vectors from the London School of Hygiene & Tropical Medicine, as well as the Diploma in Tropical Medicine & Hygiene from the Royal College of Physicians, London. He has nearly 30 years of experience in malaria control and has held multiple senior positions in the Ministry of Health Sri Lanka including Director National Malaria Control Programme and Project Director, GFATM Projects.



Dr Raquel Medialdea Carrera Epidemiologist / Training CoordinatorWorld Health Organization

Dr Raquel Medialdea Carrera is an epidemiologist from Spain with a PhD in Infectious Diseases and Global Health and currently working as the Training Coordinator in the EIOS Core Team. Raquel completed her FETP in the ECDC (EPIET) based in the Ministry of Health in Malta. Raquel has worked in Sierra Leone during the Ebola outbreak in 2015, lived for almost 2 years in Brazil during the Zika Virus epidemic and worked in India in 2018. Raquel joined WHO in 2019 to support the Ebola response and in 2020 she joined the Go.Data/GOARN team deploying to Mexico, Colombia, Brazil and Argentina. Prior to joining the EIOS Core team in 2021, Raquel worked as epidemiologist in the COVID19-Incident Management Support Team in WHO HQ. She is a passionate runner, hiker, and cyclist.



Dr Richard Brennan Regional Emergency DirectorWHO Regional Office for the Eastern Mediterranean (EMRO)

Dr Richard "Rick" Brennan is Regional Emergency Director for WHO's Eastern Mediterranean Regional Office based in Cairo, Egypt. He oversees WHO's support to 22 countries for emergency preparedness and response, including for the COVID19- pandemic, major humanitarian crises, as well as multiple other emergencies. Previously he spent 7 years at WHO headquarters, including as the Director of Emergency Operations, Director of Ebola Response and Coordination, and Director of Humanitarian Response. Rick has extensive experience in emergencies in over 40 countries across Africa, Asia, Eastern Europe and the Middle East. He received his medical degree from the University of Sydney, completed emergency medicine training in Australia and received an MPH from Johns Hopkins University. Following 12 years of clinical work, Rick joined the US Centers for Disease Control and Prevention focusing on humanitarian and emergency management issues. Thereafter he spent 10 years as Health Director of the International Rescue Committee in New York, overseeing global health operations. Prior to joining WHO in 2012 he led a large post-conflict health system support project in Liberia for JSI Research and Training. Rick has made several important contributions to advance global health emergency preparedness and response, including leading the development of WHO's Emergency Response Framework.



Samuel Mbuthia
Open Source Programme Lead
World Health Organization

Samuel Mbuthia leads the Open-Source Programme Office at the World Health Organization and is based at the WHO Hub for Pandemic and Epidemic Intelligence in Berlin. He has over 12 years of experience in various technology roles, including as an applications developer and solutions architect. Prior to joining the World Health Organization, he headed the open-source contributor community at Medic, a technology non-profit organization that builds open-source tools for health workers.



Sandrine Uwamahoro Diseases Monitoring OfficerRwanda Biomedical Centre

Sandrine Uwamahoro is a disease monitoring officer in the public health surveillance and emergency preparedness and response division at the Rwanda Biomedical Center. She has experience in diseases surveillance and epidemiology and contributes to the achievement of a healthy national population. She graduated from Mount Kenya University in 2018 with bachelor's degree in public health.



Sarah Hess Technical OfficerWorld Health Organization

Sarah Hess is a microbiologist by training with a postgraduate degree in international public health. Her career in WHO started in 2014 in the field of HIV and hepatitis, transitioning to emergency preparedness and response in 2018. Her current portfolio focuses on partnerships and global strategy and policy for epidemic and pandemic preparedness.



Dr Shimaa AhuKamer Event Based Surveillance Coordinator Ministry of Health and Population, Egypt

Dr Shimaa Ali Ali AbuKamer is a Coordinator of Event Based Surveillance system at the Department of Epidemiology and Surveillance at the Preventive Sector within the MOHP in Egypt. She graduated from the Egyptian High Committee of Medical Specialization Board in Cairo, Egypt with a degree in applied epidemiology. She obtained the Egyptian FETP - CDC training certificate through their field epidemiology training program, also holding a diploma in Medical Quality Management from the Ain Shams University (Egypt) as a Quality Management Specialist. Prior to her role as the Coordinator of Event Based Surveillance system, Shimaa was a medical Epidemiologist also working in surveillance at the Department of Epidemiology and Surveillance at the MOHP in Cairo, Egypt.health. Her career in WHO started in 2014 in the field of HIV and hepatitis, transitioning to emergency preparedness and response in 2018. Her current portfolio focuses on partnerships and global strategy and policy for epidemic and pandemic preparedness.



Prof Stephen Reicher Professor of Psychology University of St. Andrews

Stephen Reicher is Wardlaw Professor of Psychology at the University of St. Andrews. He is a Fellow of the British Academy, Fellow and Vice-President of the Royal Social of Edinburgh, a Fellow of the Academy of Social Sciences, and an Honorary Fellow of the British Psychological Society. Stephen is a social psychologist who studies group processes and collective action- including issues of social solidarity, social conflict, leadership, and social influence. During the Covid19- pandemic he served on multiple bodies including the Advisory groups to the UK and Scottish Governments and the independent scientific group 'Independent SAGE'.

68 2022 EIOS Global Technical Meeting













Tim Nguyen Unit Head High Impact Events PreparednessWorld Health Organization

Tim Nguyen is the Head of Unit for High Impact Events in the Epidemic and Pandemic Preparedness and Prevention Department of the WHO Health Emergencies Programme (WHE). His unit develops innovative approaches to community co-creation and decision-making tools. He joined WHO in 2006 working as a Technical Officer in the Yellow Fever Programme which coordinated an initiative to provide 40 million doses of vaccine to most at risk populations. In 2008, he joined WHO's Global Influenza Programme and took part in the global response work for the first influenza pandemic of the 21st century. Between 2017-2014, he was the Unit leader for Knowledge Management, Evidence and Research for Policymaking at the WHO Regional Office for Europe based in Copenhagen, Denmark. There, he established the scientific journal Public Health Panorama and developed the WHO/Europe resolution and action plan for evidence-informed policymaking.



Yasmin Rabiyan Engagement OfficerWorld Health Organization

Yasmin Rabiyan is a German-Iranian dual national, and holds an M.A. in Communications and American Studies from the University of Mainz, Germany. She has more than fifteen years of experience in Communications and Advocacy roles. For over a decade, Yasmin has worked in operational communications with Médecins Sans Frontièrs (MSF) devising communication strategies and covering humanitarian medical emergencies across the globe. Her work has spanned positions at various headquarters and country offices, including Germany, South Africa, Malawi, Switzerland and Myanmar. Other experiences include consultancies with the German Development Cooperation (GIZ) with assignments to Ethiopia, Yemen and the Palestinian Territories, and the World Wide Fund for Nature (WWF) in Myanmar. In 2018, she co-founded and successfully launched Thant Myanmar, a Nonprofit organization fighting plastic pollution in Myanmar. As EIOS Engagement Officer, Yasmin has coordinated the expansion of the EIOS initiative over the past three years and is responsible for ongoing engagement with the global community behind it.



Dr Zubaida HaqueFormer CEO/Member of Independent SAGE
The Equality Trust

Dr Zubaida Haque is the former CEO of The Equality Trust, and former interim CEO of The Runnymede Trust—a national race equality think tank in the UK. A leading social scientist, Zubaida has significant knowledge of intersectional inequalities within health, education, employment, housing, immigration and criminal justice in the UK. She has written and spoken widely on race and gender inequalities and was voted by Lancet in January 2022 as one of the leading women in the sphere of science and public health during COVID19-. Zubaida has worked in senior/management roles within think tanks, charities and government departments; and has participated as a Commissioner on national reviews e.g. 2001 race riots review in UK; Commission on Gender Equal Economy; [Lewis] Hamilton Commission. She is also an expert member of Independent SAGE (which engages directly with the public and shares independent and transparent advice about covid and public health safety), and an expert adviser on the London Mayor's Advisory Group on Equality Diversity and Inclusion, independent Advisory Group on Structural Racism and Health Equity, and Advisory Group on Disadvantage Gaps in Education. Dr Haque is also a Fellow of the Royal Society of Arts.



Acknowledgements

Many individuals contributed to the planning, development and implementation of the 2022 EIOS Global Technical Meeting and to list them all would be an impossible task. The EIOS Core Team is extremely grateful for their support and dedication and would also like to acknowledge and thank all presenters, panelists, moderators and chairs.

Special thanks also go to our hosts from the World Health Organization Regional Office for the Eastern Mediterranean for co-organizing this year's GTM and to the Centers for Disease Control and Prevention for making this meeting possible through their gracious support.

Last but not least, we want to thank you, the 2022 EIOS GTM meeting participants for taking the journey to Luxor to be part of this event and of our joint mission to strengthen public health intelligence worldwide.

The dawn of a new era for Public Health Intelligence 71

Meet the EIOS Core Team



Philip AbdelMalik Lead



Yasmin Rabiyan Engagement Coordinator



Raquel Medialdea Carrera Training Coordinator



Johannes Schnitzler Technology Coordinator



Thijs Cornelissen Data Scientist



Carolyn Briody Epidemiologist- Evaluations



Julie Fontaine Epidemiologist – User Experience



Dusan Milovanovic Solutions Architect



Mostafa Mahran Sources Coordinator



Alastair Donachie Categories Coordinator



Jean Richards Project Manager



Jason Seva Project Manager



Feyikemi Adeboye Business Analyst



Olga Lugovska Engagement Consultant



























Stefany Ildefonso Training Consultant



Brande Brown Training Consultant (ToT)



Heidi Ghanem **Engagement Consultant** (GTM)



Louise Wakeford Administrative Assistant

The EIOS Coordination Group

- Africa Centres for Disease Control and Prevention (Stephanie Salver)
- Canada: Public Health Agency Canada (Florence Tanguay)
- European Centre for Disease Prevention and Control (Gianfranco Spiteri)
- Food and Agriculture Organization of the United Nations (Fairouz Larfaoui/Madhur Dhingra)
- Global Outbreak Alert and Response Network (**Oun He**)
- Japan: National Institute of Infectious Diseases (Tomoe Shimada)
- Joint Research Centre of the European Commission (Jens Linge)
- United Kingdom Health Security Agency (Mike Reynolds)
- United States: Centers for Disease Control and Prevention (Ray Arthur)
- World Organisation for Animal Health (Jenny Hutchison)
- World Health Organization (Esther Hamblion)
- Chaired by: World Health Organization (Oliver Morgan)

