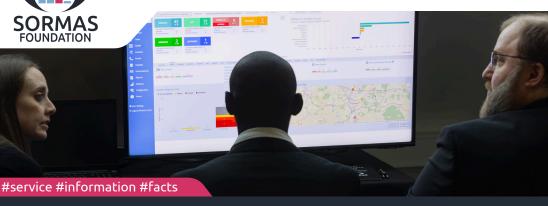


How to manage epidemics and pandemics with SORMAS

#### We're all about fighting epidemics



### How to manage epidemics and pandemics with SORMAS

Open-source software with over 40 infectious diseases modules



the experience from the COVID-19 pandemic, Luxembourg decided to introduce SORMAS for COVID-19 as well as other communicable diseases. SORMAS will interface with existing applications and new features are being developed in a generic way, in order not only to meet Luxembourg's needs but to benefit the whole SORMAS community.

Dr Anne Vergison

Head of the Health Inspection Division at the Luxembourg Health Directorate

Nepal decided to use SORMAS to address the existing gaps in the event-based surveillance system of the country, especially for early detection and response of outbreaks at the community level, through real-time digital surveillance. An open source e-health system that integrates epidemiological and laboratory surveillance together along with features like interoperability and offline capability are its important components, making SORMAS a standout choice.

Koshal Chandra Subedee

Public Health Inspector, Ministry of Health and Population, Department of Health Services, Epidemiology and Disease Control Division, Nepal.

Visit www.sormas.org



#### What makes SORMAS special

SORMAS is pivotal in Ghana's Public Health Division, revolutionizing surveillance and outbreak management at the Ghana Health Service. Its real-time data collection empowers us to monitor and combat diseases effectively. Notably enhancing Ghana's response to COVID-19, it supports early warnings and preparedness for outbreaks like Yellow Fever, Marburg, and Lassa Fever. Strengthening user capacity and fostering One Health collaboration can deepen SORMAS's

Dr Franklin Asiedu-Bekoe

Director Public Health. Ghana Health Service

#### Nigeria: a SORMAS success story

impact in Ghana.

In the face of public health challenges, the Nigeran Centre for Disease Control and

Prevention (NCDC) leveraged SORMAS to enhance real time digital surveillance, enabling rapid detection and containment of outbreaks. Through the strategic scale-up of SORMAS and continuous training, Nigeria has integrated the software into its healthcare infrastructure to empower frontline healthcare workers to swiftly identify

and manage potential health threats. Currently, SORMAS is effectively deployed and being used in 37 states for over 40 notifiable diseases covering a population of over 200 million. Users include personnel at Emergency Operation Centers (EOCs), health facilities, points of entry, laboratories, and volunteers in communities. Nigeria's adept use of SORMAS showcases the best practices in public health interventions by harnessing technology and commitment of health

staff to making a sustainable impact on the global fight against infectious diseases.



SORMAS is currently in use in several countries for surveillance and outbreak management of infectious diseases. Starting as a prototype in the aftermath of the 2014 Ebola epidemic in West Africa, SORMAS evolved to an open-source digital health platform for epidemic management and response. Since then, it continues being developed and adapted for numerous infectious diseases, including the management of pandemics.

- **URVEILLANCE**
- **UTBREAK**
- **ESPONSE**
- **ANAGEMENT AND**
- **NALYSIS**
- **YSTEM**

# **SORMAS**

A collaborative platform for early warning, detection, and response to outbreaks!

Real-time, multidirectional data sharing with integrated task management that enables efficient coordination and structured communication.

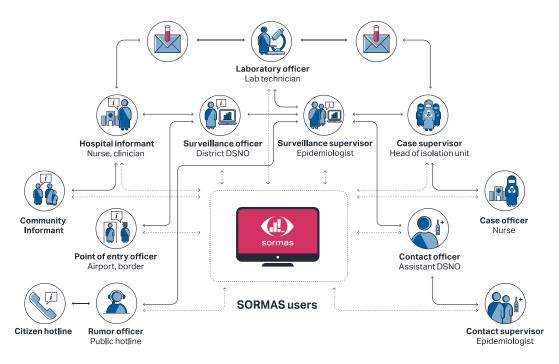
How SORMAS operates

**DETECT**notifications
screenings
rumors

#### **VALIDATE & ANALYZE**

cases contacts samples CONTROL

isolation treatment follow-up



#### SORMAS key features

# SORMAS

#### Surveillance dashboard

Case data and statistics are displayed in real-time in the Surveillance dashboard. Various indicators are calculated automatically. The epidemiological curve shows the evolution of the number of cases broken down into categories over a time period. The case status map shows the geographical distribution of cases.



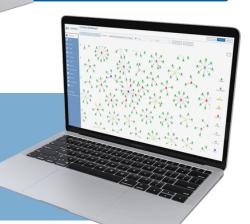


#### Contact follow-up

The contact directory shows the distribution and statistics for stored contacts and the respective quarantine status. Follow-ups can be monitored using the contact dashboard.

#### Infection chains visualization

The visualization of infection chains is key to assess the spread of diseases and support decision-making related to control measures.



Visit demo.sormas.org



#### **OWNERSHIP**

SORMAS is available to countries for use and it is customizable to country specific needs in conformance to their surveillance systems and structures.

Data processed through SORMAS belongs to the countries and its hosting and management are the responsibility of their authorities.

#### **SECURITY**

The **SORMAS** data protection and security concept follows the European data protection regulations (GDPR). includes anonymization, pseudonymization and data deletion, subject to countries. addition. In regular data and system security measures applied. Furthermore, the system is only accessed according to user rights defined by countries.

#### **TRANSPARENCY**

As an open source software, SORMAS 's source code is publicly available on the GitHub platform. It is licensed under the GNU General Public License 3.0. which makes sure that changes to the codebase or derivate projects have to be made publicly available as well.

The development process is transparent and collaborative. This way, countries enjoy high quality software and avoid vendor lock in.

Technical features



#### open-source



data protection and security according to GDPR



user-centered and science-based design platform for collaboration among different actors

- real-time data sharing and document generation
- interoperability with other systems
- configurable features and user rights
- individual statistic generation for reporting
- online and offline capability
- web and mobile version
- task management for teams
- symptom diaries

SORMAS is a Digital Public Good



Endorsed by the UN Secretary General's Roadmap for Digital Cooperation, the Digital Public Goods are: "open source software, open data, open AI models, open standards and open content that adhere to privacy and other applicable laws and best practices, do no harm, and help attain the SDGs."

SORMAS is a Mature Global Good

A mature digital health software global good is software that is free and open source, is supported by a strong community, has a clear governance structure, is funded by multiple sources, has been deployed at significant scale, is used across multiple countries, has demonstrated effectiveness, is designed to be interoperable and is an emergent standard application.



History After the Ebola epidemic in West Africa in 2014/2015, a consortium of German and Nigerian public health and research institutions and a software company, coordinated by the Helmholtz Centre for 2015 Infection Research (HZI), developed the Surveillance Outbreak Response Management and Analysis System (SORMAS). After the SORMAS prototype was developed, it was tested at different health system levels in two states of Nigeria. In 2016, SORMAS became an open-source platform. Further 2016 software development took place to include the laboratory module and additional diseases in the system. A Public Private Partnership between the Helmholtz Centre for Infection Research, Ghana Health Services and the IT company 2018 Ghana Community Network System was established to start the adaptation and testing of SORMAS. SORMAS officially fulfills the Digital Square Global Goods Maturity 2019 Assessment. In early 2020, a COVID-19 module was quickly developed in SORMAS, which led to its adoption by countries like France, Switzerland, Fiji, Ivory Coast, Nepal, and Germany. The same year, 2020 the Democratic Republic of Congo (DRC) and the OCEAC (Organisation de Coordination pour la lutte contre les Endémies en Afrique Centrale) also decided to pilot SORMAS. SORMAS data and security protection concept is expanded to 2021 fulfill GDPR regulations. Tunisia starts the deployment of SORMAS. Establishment of the SORMAS Foundation with the support of the 2022 Friends of HZI (Förderverein des HZI e.V.). Luxembourg and Djibouti started piloting SORMAS. Start of the 2023 development of the SORMAS regional concept for the IGAD and ECOWAS regions. Visit map.sormas.org



#### The SORMAS Foundation - who we are and what we do

We support local, national and international organizations in the development and implementation of SORMAS and other digital open-source systems for disease prevention and control.

The SORMAS Foundation Team

It is a privilege to work at the SORMAS Foundation as part of a diverse team that has constant engagement with end users, thereby contributing to our collective work, inspiring hope and changing lives.

Dr Candice Louw **Business Analyst** 



Dr Pilar Hernández Business Development & Projects

> Jan Böhme Technology & Operations



**Managing Directors** 

#### **Board Members**



**Prof Paul Biondich** 



Dr Natalie Mayet



**Ulrich Ahle** 



Fatema Uddin



Patrick Nguku



#### The Ecosystem

A vibrant community of implementers, users, funders, IT companies, and researchers that shares experiences and perspectives from around the world. Interested in exchange with others? Connect with our Community!



Register Now

#### Our Vision

A world in which all countries are prepared to respond to epidemics and pandemics digitally and collaboratively

Build a strong community through development, promotion, and implementation of open-source digital systems that support national and international organizations in early detection and containment of epidemics and pandemics

**Our Mission** 

Join us today and be a part of the SORMAS journey, where innovation meets impact! Together we can shape a healthier future!

# Your way to SORMAS in 4 steps

Contact us

Get in touch with us!



- info@sormas.org
- www.sormas.org
- @ community.sormas.org



We understand your needs

We will appreciate a deeper understanding of your requirements and provide guidance on optimizing the system to better meet your needs.

#### We help you implement

comprehensive needs that includes Conducting a assessment sustainability budget, defining system requirement plan and specifications, and performing tailored trainings are integral components of our approach to helping you implement a functional system.



Join our community



After the initial set up, you continue to benefit from a community of SORMASians with a wide variety of experience that is organic.

## SORMAS Foundation gGmbH

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