The 15-Year Journey of the PIP Framework and the Evolving Landscape of GISRS

SARINet plus and REVELAC-i Regional Meeting

24-26 March 2026

World Health Organization

PIP Framework

PIP Framework

A brief overview

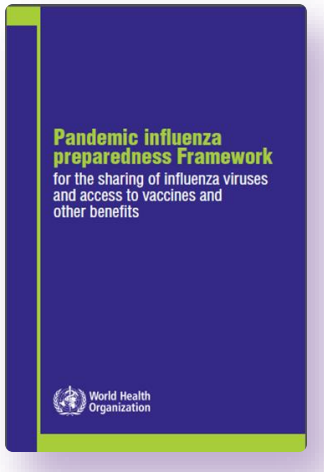
Every year seasonal influenza kills **>290 000 – 650 000 people**

In the last 100+ years pandemic influenza has killed **~ 52 000 000 people**

GISRS
GLOBAL INFLUENZA SURVEILLANCE & RESPONSE SYSTEM
Uniting the world in the fight against influenza and other respiratory viruses

World Health Organization | Framework | PIP Framework

What is the PIP Framework?



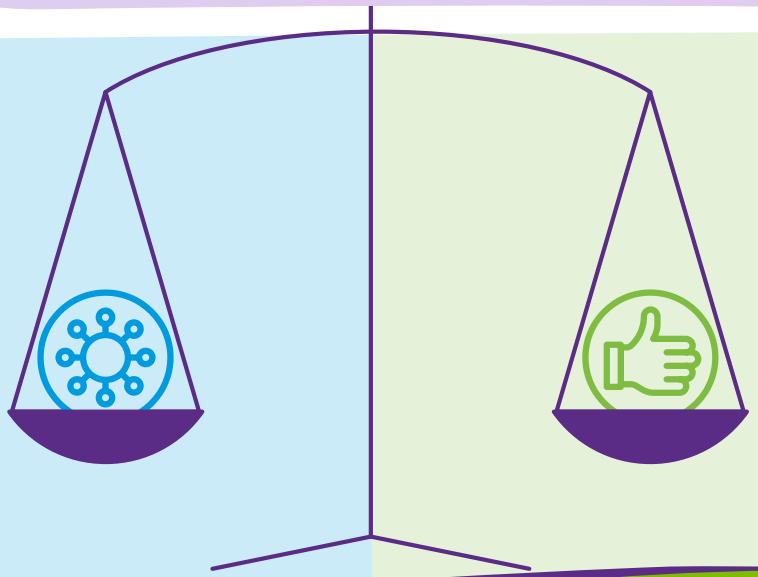
A public health Access and Benefit Sharing system adopted by the World Health Assembly in 2011

- Developed after the re-emergence of avian influenza (H5N1) or 'bird flu' in the early 2000s and the perceived inequities in access to vaccines
- Brings together Member States, industry, civil society organizations, other key stakeholders & WHO

Two equally important objectives:

1 Virus sharing

Strengthen global influenza surveillance through timely sharing of influenza viruses with pandemic potential (**IVPP**) with the Global Influenza Surveillance and Response System (**GISRS)**



2 Benefit sharing

Increase equity of access to pandemic response measures such as vaccines

World Health Organization | Framework | PIP Framework

How does the PIP Framework work?

Access

Countries share influenza viruses with pandemic potential (IVPPs) with GISRS

GISRS carries out risk assessment & analyses; recommends influenza vaccine composition & develops candidate vaccine viruses (CVVs)

Manufacturers use analyses, CVVs & information to produce influenza vaccines or other products

In return…

Benefit sharing

… countries receive risk assessments & information during interpandemic times, & donated vaccines and other supplies secured by WHO through the **SMTA2s**, based on public health risks and needs, **during a pandemic.**

… countries receive capacity strengthening for pandemic influenza preparedness and response through implementation of the annual **Partnership Contribution** (PC) (US$33.7M/y*)

**PC level updated to US$33.7M from US$28M in 2025*

Benefit sharing: Two key mechanisms

SMTA2 (Standard Material Transfer Agreement 2):

Legally binding contracts signed by WHO with **recipients of PIP Biological Materials** (PIP BM) to secure **real-time advance access to FUTURE pandemic response products**, such as vaccines and antivirals, to be donated to countries in need.

SIGNED ONCE

PC (Partnership Contribution):

Annual cash contribution to WHO from influenza vaccine, diagnostic & pharmaceutical manufacturers that use GISRS. Funds are used **NOW** to strengthen pandemic preparedness capacities where they are weak & to build a response fund to be used for **FUTURE** pandemic influenza response.

PAID ANNUALLY

What has been secured under the PIPF SMTAs2?

- **100 SMTA2 Agreements Signed**
  - Cat A — **Vaccine** Mx: 16
  - Cat B — **Diagnostics & Other pandemic products:** 2
  - Cat C — **Other institutions** (e.g. academia): 82

- **~900M doses*** of real-time production which represents ~11% of future pandemic vaccine production

- **25M Syringes**
- **Up to 5M treatment courses**

- **250,000 diagnostic kits**

*best case scenario based on current technologies; in first year of pandemic

World Health Organization | Framework | PIP Framework

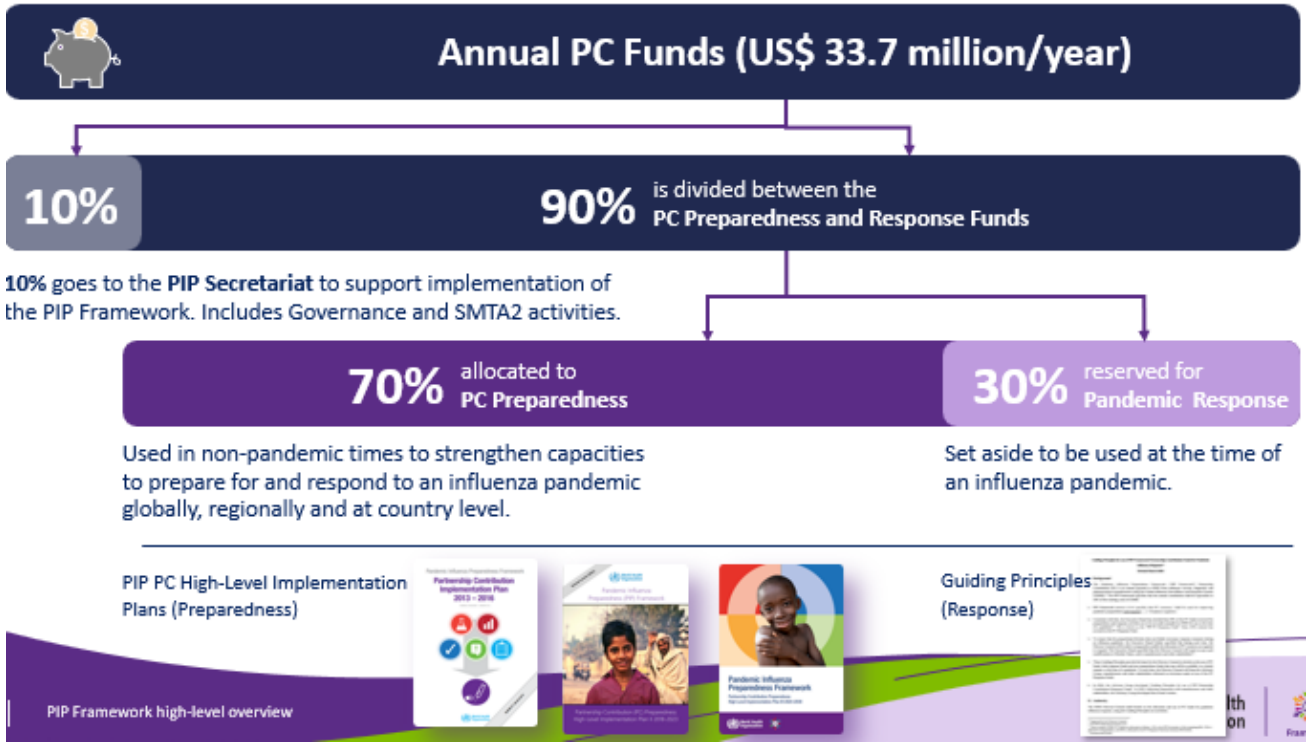
What has been achieved under Partnership Contribution (1)

- **US$ 350M** collected

- **86** Countries Supported
- Work conducted at all **3 levels of WHO:** Country, Region, Global

- Progress against indicators and milestones, as per the HLIP III M&E Framework, is reported in 4 reports per biennium. All reports are available online on the PIP PC webpage.

How are the PC funds distributed?



What has been achieved under Partnership Contribution (2)

Laboratory, Surveillance, risk assessment

- **National Influenza Centres (NICs). 25 new NICs**
- **Virus sharing**
  - ✓ 8 774 (2018—2024) zoonotic influenza viruses and other IVPPs characterized .
  - ✓ 22 new Member States (113 in 2014 vs 135 in 2024) sent shipments of influenza virus samples to WHO CCs.
- **Global reporting for surveillance**. 56 new Member States (61 in 2014 vs 117 in 2024) started or improved influenza reporting systems via global surveillance platform i.e. FluNet/FluID in GISRS.

Risk communications and Community Engagement

- **OpenWHO**. OpenWHO online learning platform with a total of 34 influenza-related courses, over 189 597 users from 194 Member States (2018—2023).

Burden of disease

- 61 Member States (as of 2024) published burden of disease estimates.

Regulatory capacity strengthening

- 15 new Member States (1 in 2017 vs 16 in 2025) achieved Maturity level 3 in WHO's classification of regulatory authorities for medicines, confirming the presence of a stable, well-functioning, and integrated regulatory system, bringing the total to 16 Member States.

Implementation partners

WHO Member States: heart of pandemic influenza preparedness & response providing guidance on PIP implementation when needed

GISRS Institutions: technical foundation of influenza detection, surveillance & global alert; share viruses and other critical information and materials

Industry: manufacture pandemic prevention, control and response products; contributes PC funds

Civil society organizations: ensure community engagement and equity as a driver, principle and outcome

WHO & development partners, including academia, foundations, and specialized institutions: promote influenza preparedness and response

Governance of PIP Framework

The PIP Framework is overseen through a three-pillared governance structure

PIP governance structure

World Health Assembly
Oversees implementation

- Oversees implementation of the PIPF
- Receives reports from the WHO Director-General
- Provides overall policy direction

WHO Director-General
Promotes implementation

- Responsible for promoting implementation of the PIPF
- Receives recommendations and guidance from PIP Advisory Group
- Reports to Member States

PIP Advisory Group
Monitors implementation

- 18 experts drawn from Member States across all WHO regions
- Provides evidence-based recommendations and guidance to the WHO Director-General to strengthen the functioning of the PIPF

Thank You to all the PIP partners throughout these past 15 years

- Member States
- GISRS
- Industry & Associations
- Civil Society Organizations
- Other Partners
- WHO Staff across all levels of the Organization

Nothing would have been possible without you!

World Health Organization | PIP Framework | PIP Framework

Contact

PIP Framework
Epidemic and Pandemic Threat Management
WHO Health Emergencies Programme
email pipframework@who.int

World Health Organization
20 Avenue Appia
1211 Geneva 27
Switzerland

World Health Organization | PIP Framework | 15 PIP Framework

A 15-Year Journey of PIP Framework and the Evolving Landscape of GISRS

Anne Huvos & Wenqing Zhang

PAHO Pan American Health Organization World Health Organization Americas Region

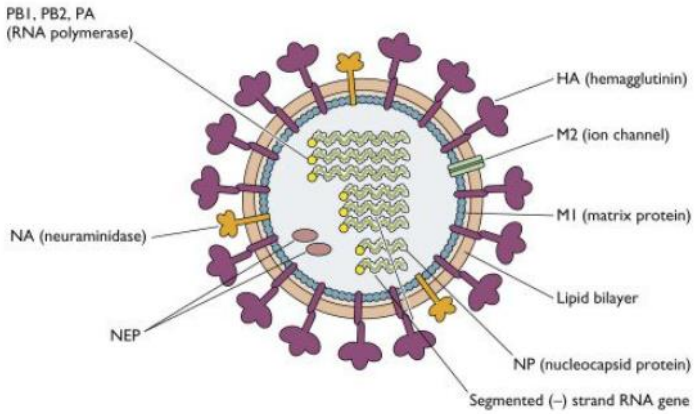
SARInet plus Severe Acute Respiratory Infections Network

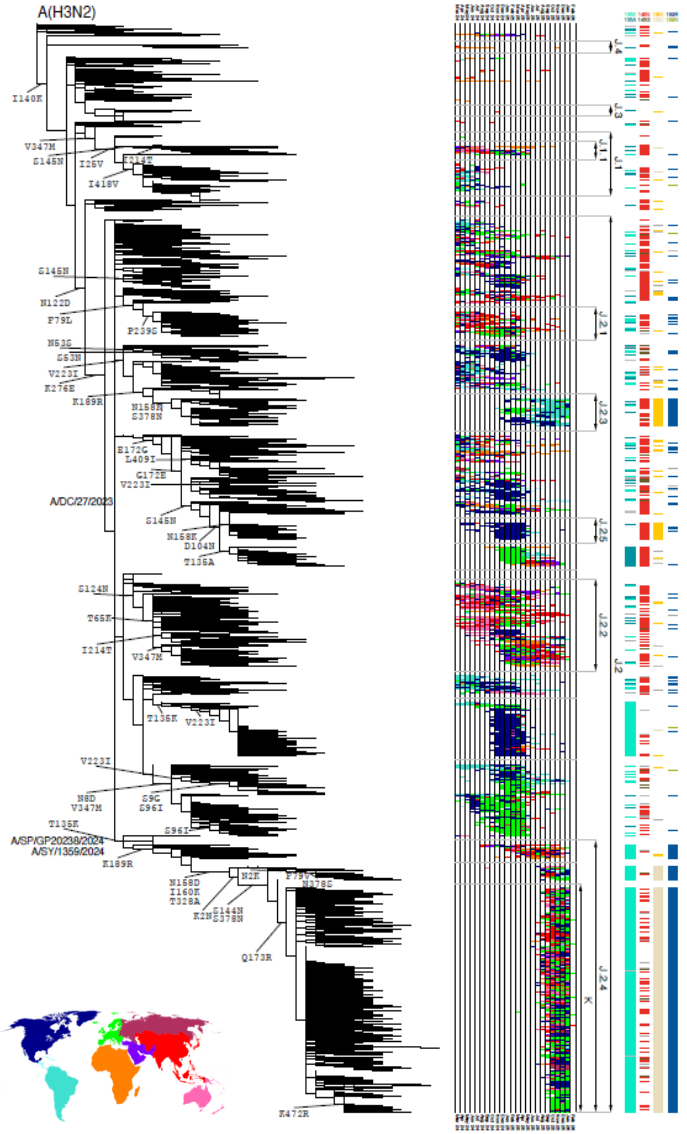
REVELAC-i

SARINET PLUS REVELAC-i REGIONAL MEETING PANAMA - MARCH 2026

Influenza epidemics and pandemics

Rapid viral evolution & reassortment





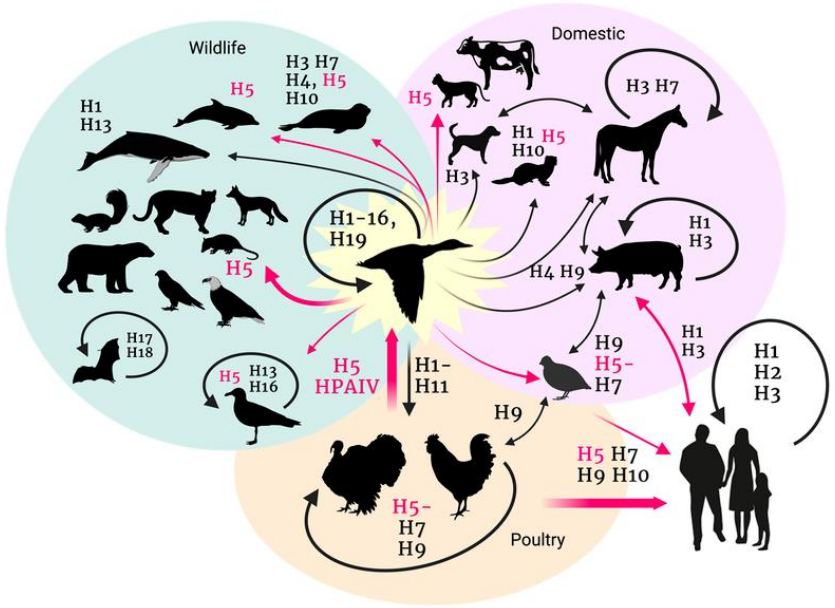
Genetic evolution of HA of seasonal A(H3N2) in 12 months

Significant health burden

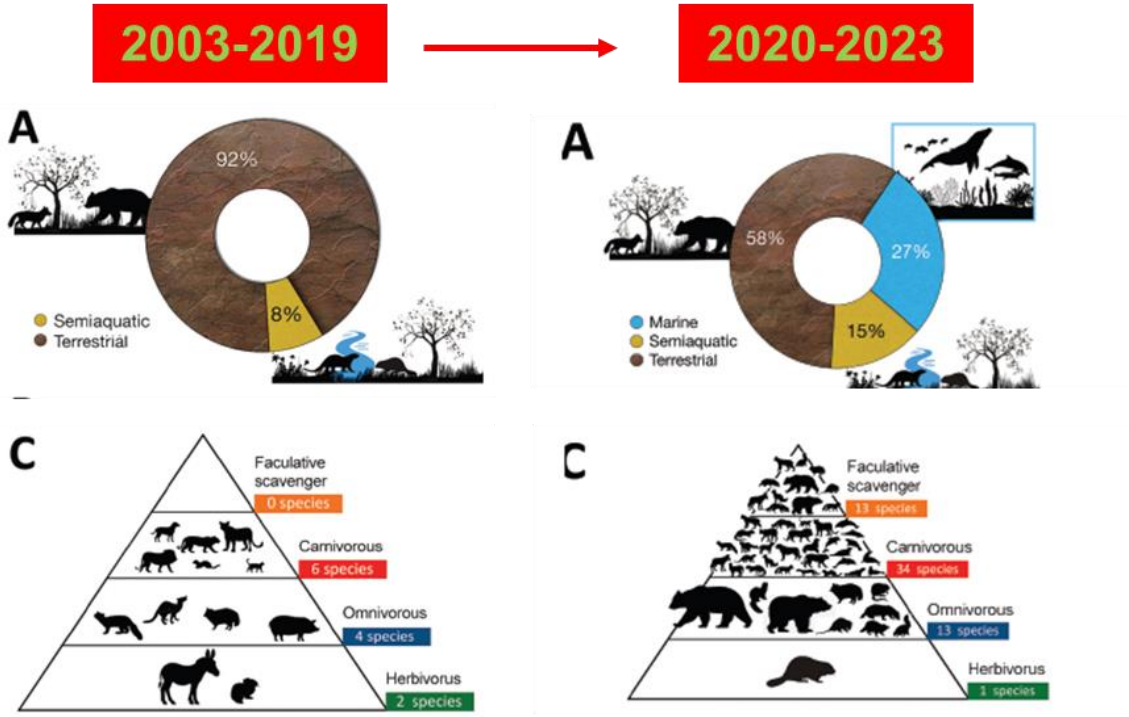
- **Pandemic influenza** kills:
  >52 000 000 people
  *in the **100 years** from 1918*
- **Seasonal influenza** kills:
  290 000 – 650 000 people
  every year

Constant pandemic risk

- Vast reservoir in wild aquatic birds
- Avian influenza endemic in domestic poultry
- Swine influenza circulating in pigs

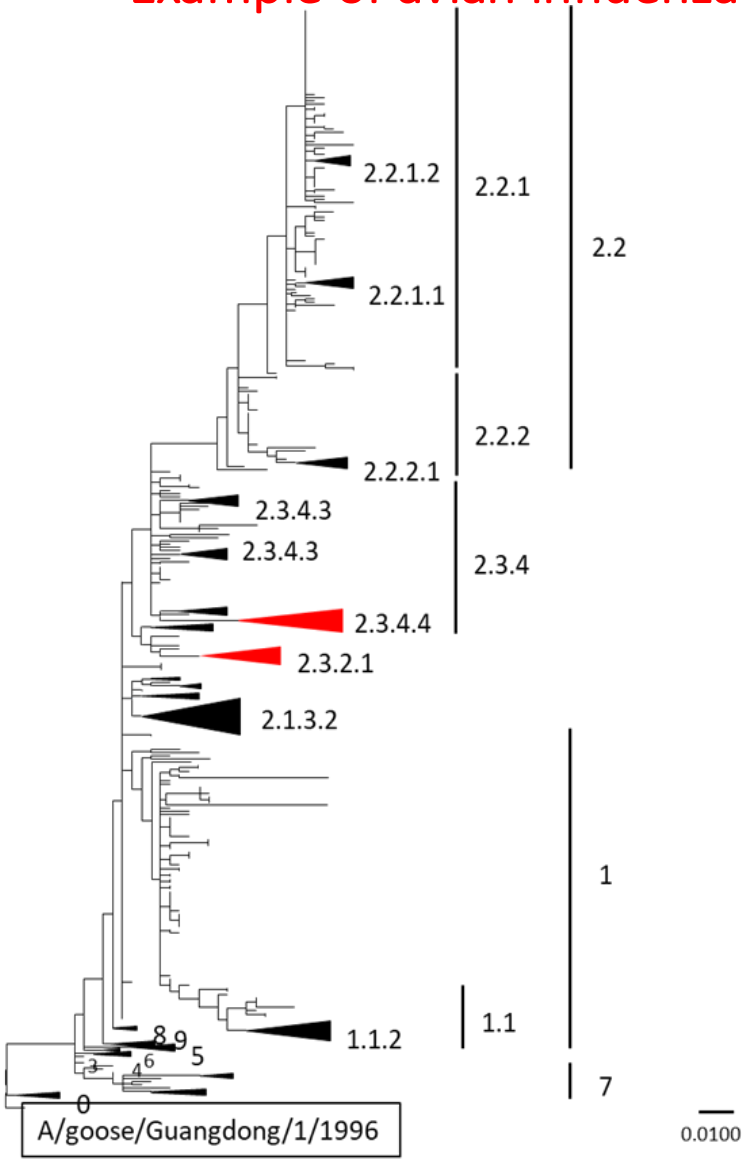


- Increasing spillover across species



Multi-dimensional and substantial burden

- Example of avian influenza A(H5)



Multi-dimensional and substantial burden

- Example of avian influenza A(H5)

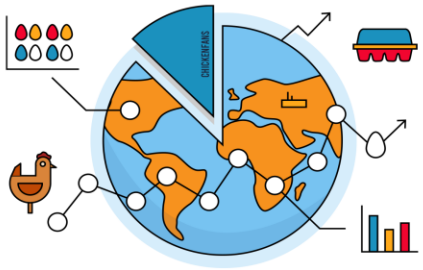
Poultry industry, livelihoods, food security

+633 million

poultry lost since 2005

(146 million in 2022)

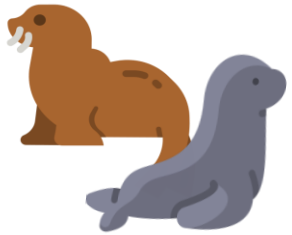
Global market and Trade



48 billion USD

global poultry market disrupted

Wildlife and biodiversity



>50,000

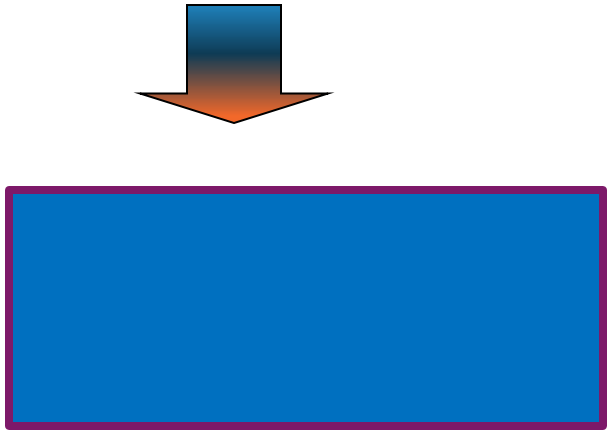
marine mammals lost during 2023

Public Health

48% case-fatality rate in humans (H5N1)

Combating influenza requires global approach

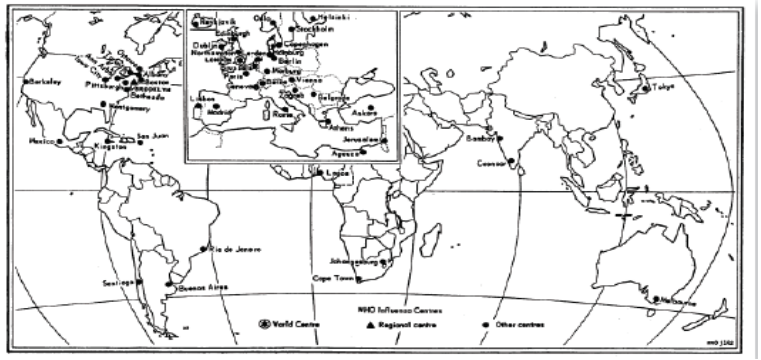
- Click to add text
  - Second level
    - Third level
      - *Fourth level*
        - *Fifth level*



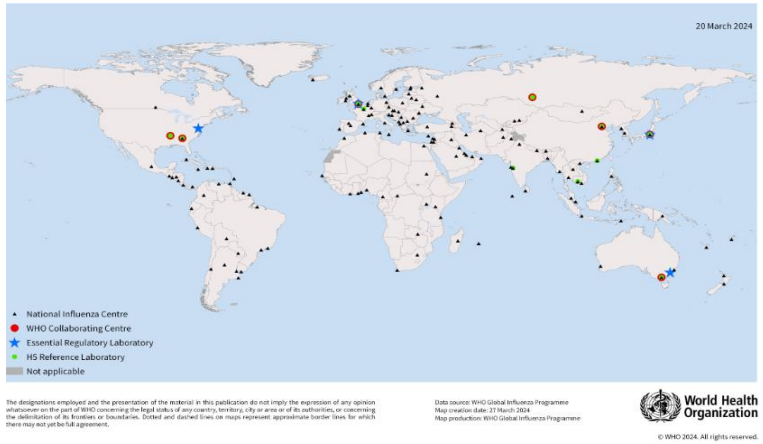
Courtesy of Drs. K.Gopal Murti and Robert Webster
St Jude Children's Research Hospital of Memphis , Tennessee, USA.

GISRS – since 1952

1953 - 54 NICs* in 42 countries



2026 - 158 NICs* in 139 countries



- **Since 1952:** seasonal influenza
- **Since 1997:** **+** avian influenza, variant/swine influenza, pandemic influenza

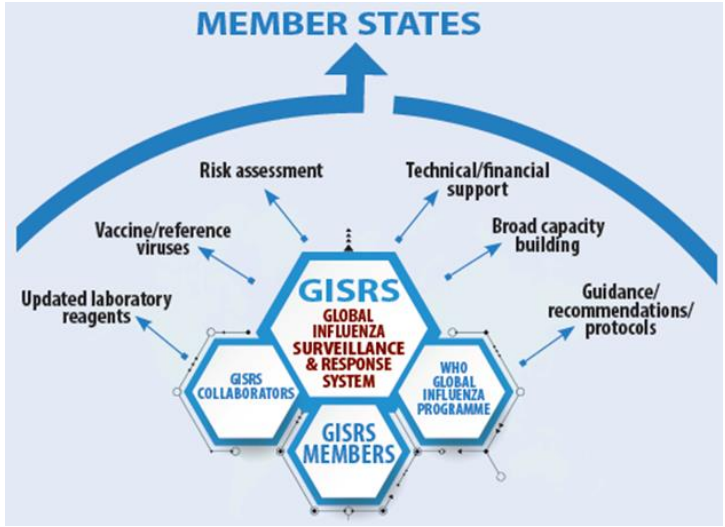
→ **New subtypes, new genetic & antigenic variants**

- **Since 2015:** **++ RSV**
- **Since 2020:** **+++ SARS-CoV-2**

* NICs: National Influenza Centres

GISRS capacity building since 2011

Member States adopted the PIP Framework in WHA 2011



GISRS hosting countries

Other countries

GISAID

CDC

BILL & MELINDA GATES foundation

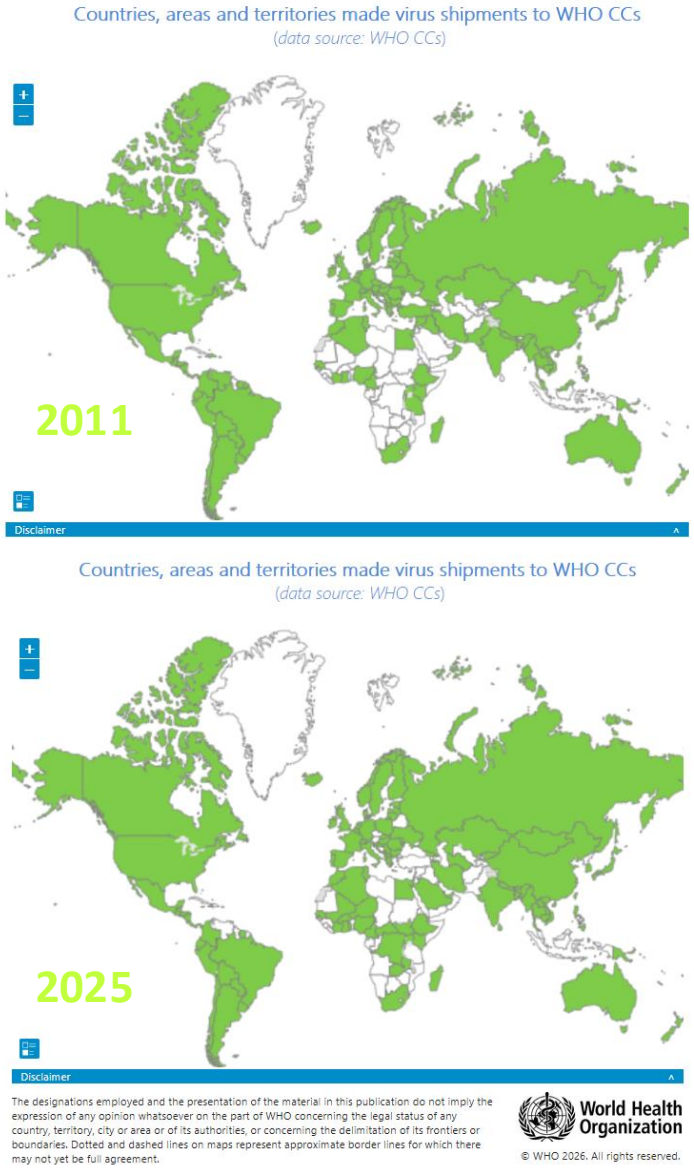
USAID FROM THE AMERICAN PEOPLE

IFPMA

Many others not listed here

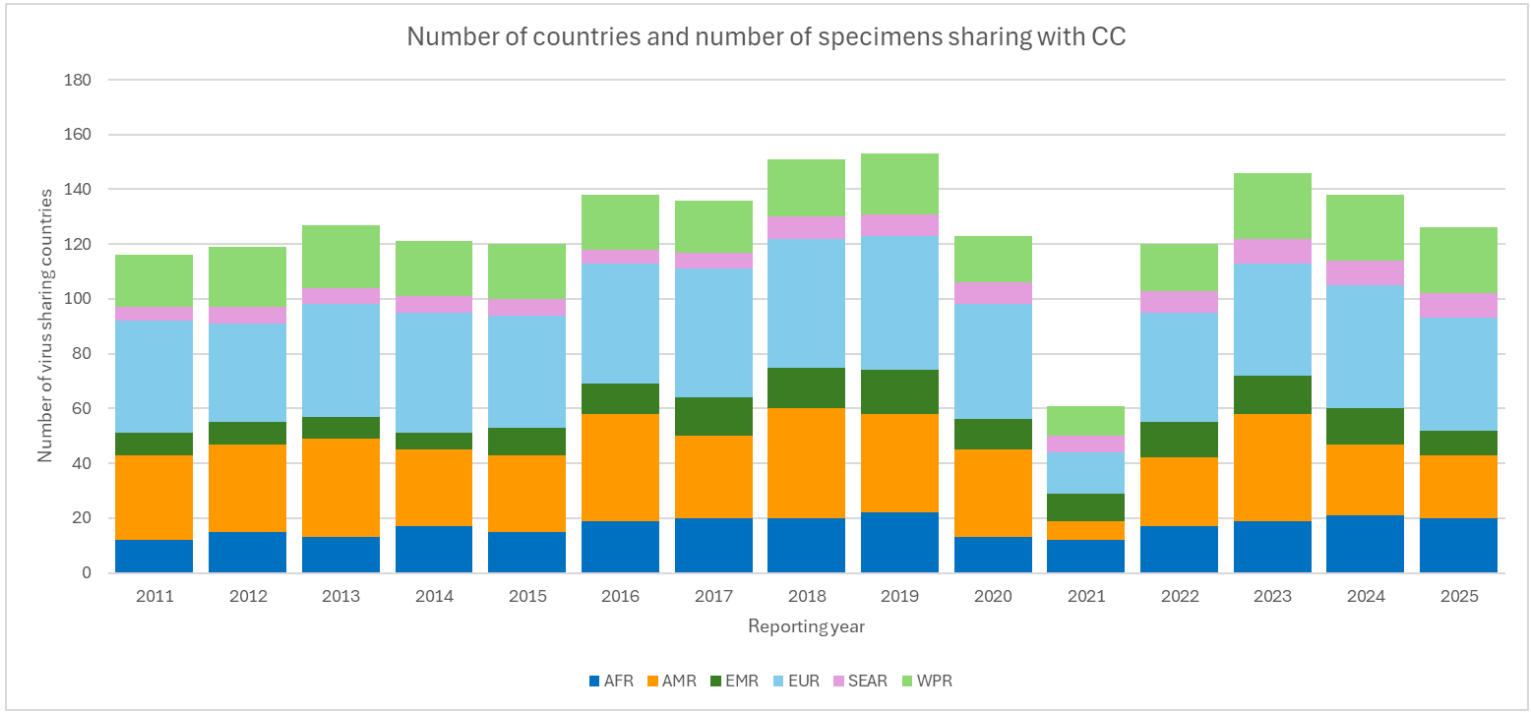
GISRS capacity building since 2011

An example: virus sharing



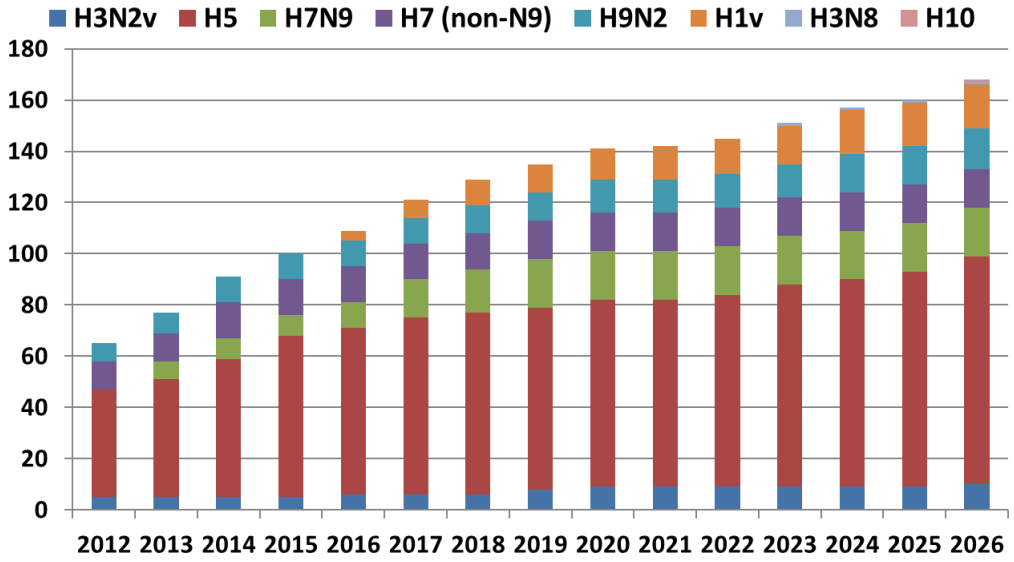
116 → 126 **Countries, areas and territories**

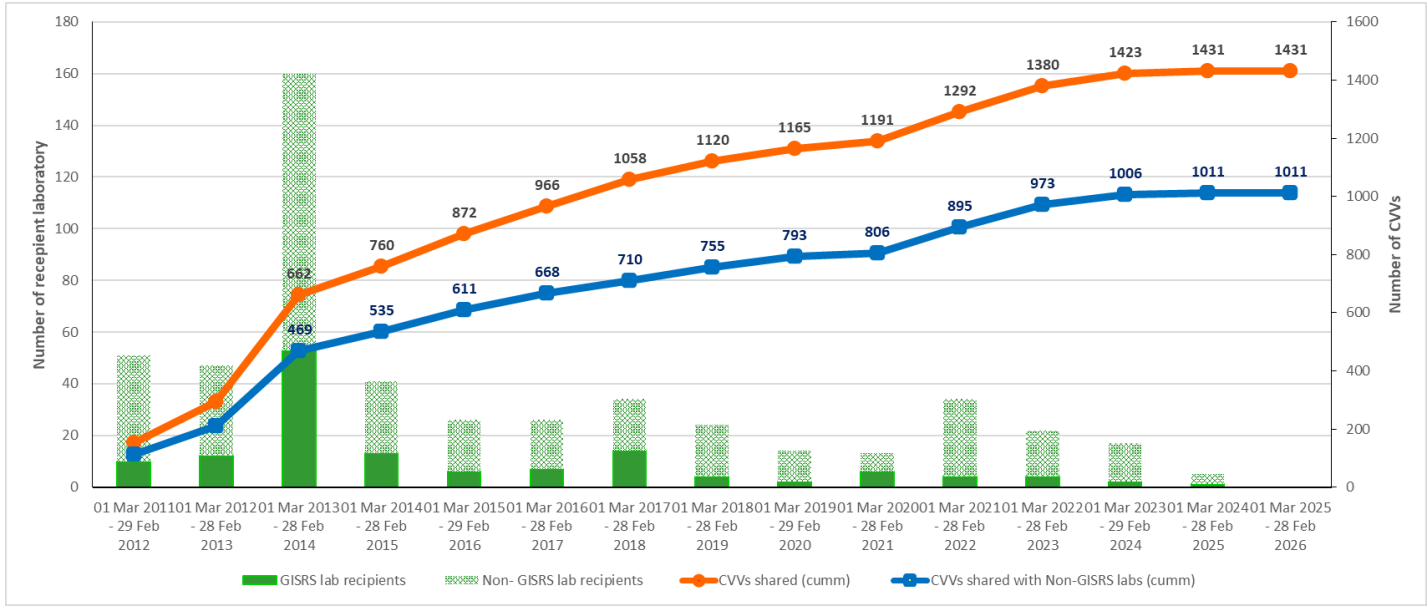
665 → 1271 **Shipments**

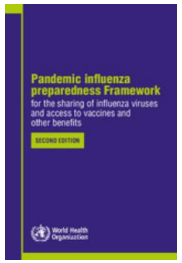


GISRS capacity building since 2011

An example: candidate vaccine viruses







SMTA 2 of PIP Framework

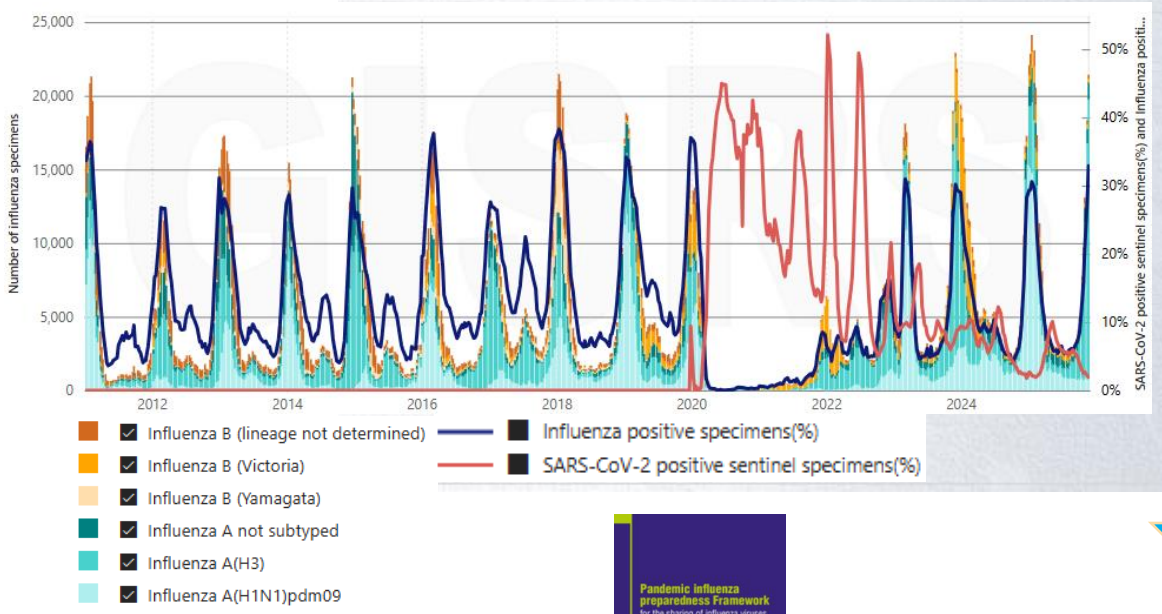
GISRS capacity building since 2011

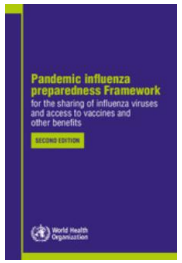
An example: surveillance & vaccine composition

A/Perth/16/2009
A/Victoria/361/2011
A/Texas/50/2012
A/Switzerland/9715293/2013
A/Hong Kong/4801/2014
A/Singapore/INFIMH-16-0019/2016
A/Switzerland/8060/2017
A/Kansas/14/2017
A/South Australia/34/2019
A/Hong Kong/2671/2019
A/Cambodia/e0826360/2020
A/Darwin/9/2021
A/Thailand/8/2022
A/Croatia/10136RV/2023
A/Singapore/GP20238/2024
A/Darwin/1454/2025

Recommended A(H3N2) vaccine components

Global virus circulations





Partnership Contribution of PIP Framework

Evolving landscape

GISRS-related

- Global – One Health
- Timely
- Continuous

Opportunities

- **National Security Attention**
  Growing investment as influenza gains strategic importance
- **One Health in Action**
  Cross-sector collaboration becoming operational
- **Integrated Approaches**
  Systems increasingly connected across domains
- **Public Health Leadership**
  Strong awareness and momentum from health authorities

Challenges

- **Fragmented Global Efforts**
  Coordination remains uneven
- **Divergent Objectives**
  Stakeholders pursue different priorities
- **Risk of Superficiality**
  Pathogen-agnostic models may dilute efforts needed for specific high-risk threats
- **Resource Competition**
  Funding and capacity stretched across agendas

Evolving landscape

GISRS-related

- Global – One Health
- Timely
- Continuous

Opportunities

- **Pandemic Agreement Momentum**
  Adoption at WHA and ongoing Pathogen Access and Benefit-Sharing (PABS) discussions for greater equity and access
- **Strategic Global Framework**
  Global Influenza Strategy (2019–2030) driving systematic, coordinated action
- **Established Global Architecture**
  Global Influenza Programme (GIP) – a long-standing mechanism coordinating GISRS since its establishment in 1952

Challenges

- **System Uncertainty**
  Unclear implications to well – functioning PIP Framework and GISRS, especially on sharing of viruses and genetic sequence data
- **Geopolitical Headwinds**
  Conflicts and crises undermining global collaboration and implementation
- **Fragile Coordination**
  WHO's financial pressures risk weakening the GIP's global leadership; the global coordination of GISRS is hard-won and not readily replicable by any actor

Evolving landscape

GISRS-related

- Global – One Health
- Timely
- Continuous

Opportunities

- **Next-Generation Vaccine Platforms**
  mRNA and other emerging technologies provide innovative avenues for strengthening influenza preparedness
- **AI-Enabled Transformation**
  Big data and AI are driving a new wave of analytical and operational capabilities

Challenges

- **Operational Integration**
  Ensuring new vaccine platforms complement - rather than disrupt - existing influenza systems and seasonal vaccine workflows
- **AI Reliability Risks**
  Gaps in basic scientific understanding may shape or bias AI models, raising concerns as reliance on these tools expands across sectors, including policy decision-making

Summary

- **PIP Framework:** ***the world's (only) fully operational PABS mechanism***, functioning effectively for influenza since 2011 – **Happy 15th Anniversary !!**

- **GISRS:** a proven, purpose-built system, ***the longest-standing global network*** **for systematic surveillance and response to infectious diseases**
  - Built on a clear mandate for influenza, with demonstrated capacity to expand to **other respiratory viruses** when needed
  - A global public good - essential for **influenza** today and for future "**Disease X**"

- **GISRS-PIP:** real-world ***successful model*** informing broader PABS negotiations
- **A critical moment**: full of opportunities, which comes with challenges

Acknowledgements

- **Global Influenza Surveillance and Response System**
  - Members of GISRS
  - GISRS hosting countries and other countries
  - GISRS collaborators, donor agencies, and other partners
- **Public & private sectors, and academia contributing to the implementation of PIP Framework and Global Influenza Strategy**
- **WHO programmes and teams**
  - Global Influenza Programme
  - PIP Framework Secretariat
  - WHO Regional Offices
  - Other WHO teams

Muchas gracias

Thank You