#### Antimicrobial Resistance: The Slow Pandemic and Global Call to Action A Decade of Progress and the Future Directions

薬剤耐性問題: スローパンデミック、世界の行動喚起 ここ10年の政策進展、そして今後の方向性

National Graduate Institute for Policy Studies(政策研究大学院大学)

December 16, 2024

Yasuhisa Shiozaki

Former Minister of Health, Labour and Welfare, Japan Member, Global Leaders Group on AMR

# Agenda

- **1. AMR and Its Historical Context**
- 2. The Critical Role of the One Health Approach
- 3. Fundamental Challenges and Complexities in AMR
- 4. Political Actions and Achievements
- 5. The Achievement of Japan's National Action Plan
- 6. Future Prospects

### Global historical position of invention of antimicrobials - Greatest invention raking -

Rank	shareranks.co m	famousinvent ors.org	livescience. com	history.com	theatlantic. com	levotron.co m
1	Wheel	Steam engine	Wheel	Printing press	Printing press	Internet
2	Electricity	Wheel	Nail	Compass	Electricity	Computer
3	Language	Printing press	Compass	Paper currency	Penicillin	Light bulb
4	Printing Press	Computer	Printing Press	Steel	Semiconduc tor electronics	Communicati ons
5	Computer	Internet	Internal combustion engine	Electric light	Optical lenses	Printing Press
6	Internet	World Wide Web	telephone	Domesticatio n of horse	Paper	Wheel
7	Antibiotics	Television	Light bulb	Transistor	Internal combustion engine	Compass
8	Telephone	Light bulb	Penicillin	Magnifying lenses	Vaccine	Photography
9	Toilet	Penicillin	Contracepti ves	Telegraph	Internet	Penicillin
10	Transistor	Telephone	Internet	Antibiotics	Steam engine	Plough

#### Antimicrobials are essential infrastructure.



3

Graphic: Courtesy of CARB-X

Sir Alexander Fleming ended with a warning for future generations in the Nobel acceptance speech for the discovery of Penicillin in 1945.



*"The time may come when penicillin can be bought by anyone in the shops.* 

Then there is the danger that the ignorant man may easily underdose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant. "

(Please see the full text of this speech the link below): https://www.nobelprize.org/uploads/2018/06/fleming-lecture.pdf

## Global historical position of invention of antimicrobials - Greatest invention raking -

Rank	shareranks.co m	famousinvent ors.org	livescience. com	history.com	theatlantic. com	levotron.co m
1	Wheel	Steam engine	Wheel	Printing press	Printing press	Internet
2	Electricity	Wheel	Nail	Compass	Electricity	Computer
3	Language	Printing press	Compass	Paper currency	Penicillin	Light bulb

"We are in danger of going back to the Dark Ages of medicine. To see infections that were treatable, not be treatable, and we will see many thousands of people potentially die from these infections."

#### David Cameron, British Prime Minister, 2 July 2014

7	Antibiotics	Television	Light bulb	Transistor	Internal combustion engine	Compass
8	Telephone	Light bulb	Penicillin	Magnifying lenses	Vaccine	Photography
9	Toilet	Penicillin	Contracepti ves	Telegraph	Internet	Penicillin
10	Transistor	Telephone	Internet	Antibiotics	Steam engine	Plough

### Global burden of bacterial antimicrobial resistance (*The Lancet, February 12, 2022*)



Source; "Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis" The Lancet, Volume 399, Issue 10325, p629-655, February 12, 2022

2050	AMR	<b>10</b> million deaths attributable to AMR	10.00
2019	Cancer		10.00
	Diabetes	1.50	
Diarrhea	l disease	1.40	
ŀ	HV/AIDS	0.86	
	Malaria	0.64 (millio	n deaths)

Source;

Tackling drug-resistant infections globally: final report and recommendations Review on Antimicrobial Resistance, London, 2016 <u>https://amr-review.org/sites/default/files/160518\_Final%20paper\_with%20cover.pdf</u>

# Agenda

- 1. AMR and Its Historical Context
- 2. The Critical Role of the One Health Approach
- 3. Fundamental Challenges and Complexities in AMR
- 4. Political Actions and Achievements
- 5. The Achievement of Japan's National Action Plan
- 6. Future Prospects

# Global antibiotic use for animals accounts for approximately 70%

Breakdown of antibiotic use for livestock (cattle, pigs, chickens) by country (2010)



\* 70% consumed by animals includes the consumption of *pesticides*.



Japan 1.7% Germany 3%

Source: Van Boeckel TP, *Proc. Natl Acad Sci*. 2015; 112: 5649–5654. Japan's data is estimated by 2011 data from the Ministry of Agriculture, Forestry and Fisheries statistics of Japan. It does not indicate that Japan is the 6th largest country using antibiotics in the world.

### Antibiotic use for humans accounts for approximately 31% in Japan (2021)



Source: https://amrcrc.ncgm.go.jp/surveillance/020/file/Sales\_2013-2023\_1.pdf

# AMR is a complex threat requiring One Health Response



Source : Professor Dame Sally Davies, UK Special Envoy for AMR Department of Health & Social Care "Antimicrobial innovation for national and global health security" 28 February 2023



households.

Antimicrobial resistant pathogens transferred to humans and animals through the environment (water, soil, air) or by direct contact with humans and animals. Estimated global environmental water contamination and pollution from antimicrobials (Vivid Economics 2020)



#### Figure 7

Estimated global environmental water contamination and pollution from antimicrobials (Vivid Economics 2020)

Source; The report Bracing for Superbugs (UNEP) https://wedocs.unep.org/bitstream/handle/20.500.11822/38444/antimicrobial Report.pdf?sequence=1&isAllowed=y

#### UNEP Report : Environmental complexities in transmission and spread of AMR "Bracing for Superbugs" (2023)



Source; The report Bracing for Superbugs (UNEP)

https://wedocs.unep.org/bitstream/handle/20.500.11822/38444/antimicrobial\_Report.pdf?sequence=1&isAllowed=y

# Agenda

- 1. AMR and Its Historical Context
- 2. The Critical Role of the One Health Approach
- 3. Fundamental Challenges and Complexities in AMR
- 4. Political Actions and Achievements
- 5. The Achievement of Japan's National Action Plan
- 6. Future Prospects

- Antimicrobial resistance (AMR) is one of the top global public health and development threats. It is estimated that bacterial AMR was directly responsible for 1.27million global deaths in 2019 and contributed to 4.95million deaths.
- The misuse and overuse of antimicrobials in humans, animals and plants are the main drivers in the development of drug-resistant pathogens.
- AMR affects countries in all regions and at all income levels. Its drivers and consequences are exacerbated by poverty and inequality, and low- and middleincome countries are most affected.
- AMR puts many of the gains of **modern medicine at risk**. It makes infections harder to treat and makes other medical procedures and treatments such as surgery, caesarean sections and cancer chemotherapy much riskier.
- The world faces an antibiotics pipeline and access crisis. There is an inadequate research and development pipeline in the face of rising levels of resistance, and urgent need for additional measures to ensure equitable access to new and existing vaccines, diagnostics and medicines.

#### Antibiotic research and development has become stagnant over the past 30 years.

#### Years of Discovery of New Classes of Antibiotics



### The number of novel antimicrobials released continues to decrease in Japan.

- The number of novel antibacterials released in Japan decreased from a total of 51 types in the period of 1976 -1985 to a total of 9 types in the period of 2006 - 2015.
- The number of novel 3 groups of antibacterials (Cephalosporin, Macrolide, Quinolone) which are effective against a wide range of bacteria decreased from 29 types in the period 1976 1985 to 2 types in the period 2006 2015.



3 groups of antibacterials which are effective against a wide range of bacteria.

# Agenda

- 1. AMR and Its Historical Context
- 2. The Critical Role of the One Health Approach
- 3. Fundamental Challenges and Complexities in AMR
- 4. Political Actions and Achievements
- 5. The Achievement of Japan's National Action Plan
- 6. Future Prospects



"The world could soon be cast back into the dark ages of medicine unless action is taken to tackle the growing threat of resistance to antibiotics. "

David Cameron UK Prime Minister, July 2, 2014 Source; <u>https://www.antibioticresearch.org.uk/uk-prime-minister-cameraon-warns-medicine-returning-dark-ages-antibiotic-research-uk/</u>



# "Antibiotic resistant bacteria is one of the most pressing public health issues facing the world today."

President Obama Remarks on Antibiotic-Resistant Bacteria, March 27, 2015 Source; <u>https://www.c-span.org/video/?325063-2/president-obama-remarks-antibiotic-resistant-bacteria</u>





*"I think this (resistance to antibiotics) is an issue of crucial importance for the entire human race – for people in developed and less developed countries alike."* 

German Chancellor Angela Merkel, World Health Organization's World Health Assembly in Geneva, May 2015 Source; https://iris.who.int/handle/10665/253223

# " Drugs Don't Work : A Global Threat"

**Professor Dame Sally C. Davies** 



Published in September, 2013



Dame Sally Davies GCB DBE FRS FMedSci

Former Chief Medical Officer for England  $(2010 \sim 2019)$ Master of Trinity College, Cambridge

# World Health Assembly adopted a "Global Action Plan on Antimicrobial Resistance" with "One Health approach" in 2015.



#### Global Action Plan on Antimicrobial Resistance outlines five objectives:

- . to improve **awareness** and understanding of antimicrobial resistance through effective communication, education and training;
- 2. to strengthen the knowledge and evidence base through **surveillance** and research;
- 3. to **reduce the incidence** of infection through effective sanitation, hygiene and infection prevention measures;
- 4. to optimize the use of antimicrobial medicines in human and animal health;
- 5. to develop the economic case for sustainable investment that takes account of the needs of all countries and to **increase investment** in new medicines, diagnostic tools, vaccines and other interventions.

#### Source;

https://iris.who.int/bitstream/handle/10665/193736/9789241509763\_eng.pdf?sequence=1

#### One Health approach

- AMR is a complex problem that requires both sector-specific actions in the human health, food production, animal and environmental sectors, and a coordinated approach across these sectors.
- One Health refers to an integrated, unifying approach that aims to achieve optimal and sustainable health outcomes for people, animals and ecosystems.
- It recognizes that the health of humans, domestic and wild animals, plants and the wider environment are closely linked and inter-dependent.

## World leaders agree on action to fight against AMR : 2015-2016



The 2016 UNGA High Level Meeting on AMR and "Political Declaration" changed the paradigm for the AMR response globally.



#### Global commitments against AMR in the 2016 UNGA-HLM "Political Declaration"

United Nations AREATIO	1. Develop multisectoral National Action Plans
Secret-first section	2. WHO and stakeholders to support implementation of national action plans
Resolution adopted by the General Assembly on 5 October 2016 [withus reference in a Man Commune (1/14.2)]	3. Mobilize adequate, predictable and sustainable funding
71/3. Political declaration of the high-level meeting of the General Assembly on antimicrobial resistance The General Assembly.	4. Surveillance, monitoring and regulatory frameworks
Recalling its resolutions 70/183 of 17 December 2015 and 70/297 of 25 July 2016, in which it decoded to hold a high-level meeting on antimicrobal avistance on 21 September 2016, Adapts the following peditical declaration approved by the high-level meeting of the General Assemble on suminoided privations on 31 Semanber 2016.	5. Awareness and behavioral change
Political declaration of the high-level meeting of the General Assembly on antimicrobial resistance We, Heads of State and Government and representatives of States and	6. Multisectoral One Health approach
Governments, meeting at United Nations Headquatters in New York on 21 September 2016, in accordance with General Assembly resolution 101(8) of 11 December 2015, in which the Assembly decided to hold a high-fevel meeting in 2016 on antimicrobial resistance: 1. Reafferm that the blueprint for tackling antimicrobial resistance is the	7. A global development stewardship framework
World Health Organization global action plane on antimicrobial resistance <sup>2</sup> and its five overarching strategic objectives developed by the World Health Organization in collaboration with, and subsequently adopted by, the Food and Agriculture Organization of the United Nations and the World Organization for Animal Health;	8 Establish the Interagency Coordination Group (IACG)
a. Anose restatures must use cover Agramas Mel Statistishiki Develophienti elluis a framework to current beakhy lives, and excell commitments to fight malarin, HW/ADDS, tubercolousis, legatitis, the Ibada virus disease and other communicable diseases and epidemics, including by addressing growing antimicrobial resistance	

IACG submitted the final report and recommendations to the UN Secretary-General in April 2019.



ACG Interagency Coordination Group on Antimicrobial Resistance E2: The IACG recommends the urgent establishment of a One Health <u>Global Leadership Group on Antimicrobial</u> <u>Resistance</u>, supported by a Joint Secretariat managed by the Tripartite agencies (FAO, OIE and WHO).



# G7 Leaders reaffirm human security and UHC, including tackling AMR.

- G7 Hiroshima Summit (2023) -



### G7 Hiroshima Leaders' Communiqué (May 20, 2023)

- 34. ... We reaffirm the essential role of UHC in addressing various health challenges significantly set back by the pandemic, including in humanitarian contexts, such as tackling communicable diseases including HIV/AIDS, tuberculosis, hepatitis, malaria, polio, measles, cholera, and neglected tropical diseases (NTDs), antimicrobial resistance (AMR), noncommunicable diseases (NCDs) including mental health conditions, realizing comprehensive sexual and reproductive health and rights (SRHR) for all, and promoting routine immunization, healthy ageing, and water, sanitation and hygiene (WASH)....
- 35. ... We also reiterate our commitment to addressing global health threats including those exacerbated by climate change, biodiversity loss and pollution through integrated measures and by applying a holistic One Health approach. <u>Recognizing the rapid escalation of AMR globally, we continue to commit to exploring and implementing push and pull incentives to accelerate R&D of antimicrobials as well as promoting antimicrobial access and stewardship for their prudent and appropriate use toward the UNGA HLM on AMR in 2024. ....</u>

# Securing the global antibiotic innovation chain



Image Source; CARB-X

## Pull incentives/ National access measures of country

Pull incentive/National access measures	
<b>Subscription Model</b> (+Models for the evaluation and purchase of antimicrobials)	The government pays a fixed annual fee for access to new antimicrobials.
Antimicrobial Securement Support Program	The government imposes national stewardship policy for novel antimicrobial drugs to strictly restrict its use based on national guidelines and reimbursement requirements. The government subsidizes lost revenue opportunity due to national stewardship policy.
Annual Revenue Guarantee model	A federal agency contractually guarantees the marketing authorization holder an annual revenue so long as all contractual stipulations are met.
High unit price model	Incentives where antibiotics that meet a minimum clinical data standard may negotiate higher unit prices.
Subscription-style model (non-active) PASTEUR Act (The Pioneering Antimicrobial Subscriptions To End Up Surging Resistance Act of 2021)	The government offers antibiotic developers an upfront payment in exchange for access to their antibiotics, encouraging innovation and ensuring our health care system is prepared to treat resistant infections.
	Pull incentive/National access measuresSubscription Model (+Models for the evaluation and purchase of antimicrobials)Antimicrobial Securement Support ProgramForecast market size ** of target antimicrobialForecast market size ** of target antimicrobialAnnual Revenue Guarantee modelHigh unit price model PASTEUR Act (The Pioneering Antimicrobial Subscriptions To End Up Surging Resistance Act of 2021)

# Agenda

- 1. AMR and Its Historical Context
- 2. The Critical Role of the One Health Approach
- 3. Fundamental Challenges and Complexities in AMR
- 4. Political Actions and Achievements
- 5. The Achievement of Japan's National Action Plan
- 6. Future Prospects



# Japan's National Action Plan of AMR (2016-2020 and 2023-2027)

Tokyo Conference on AMR One Health

	2016-2020	2023-2027
*	Public awareness and education AMR Reference Center provided educational materials and seminars.	Enhance training programs on infection control and proper use of antimicrobials
	Survey and monitoring Establish infectious disease outbreak trend survey (JANIS, JSAC, JVARM)	Enhance antimicrobial resistance surveys in the livestock industry, fisheries and pet industry
**	Infection prevention and control Infection control improvement premium Field epidemiology	Develop vaccines and immunostimulants for livestock, farmed aquatic animals, and pets.
	Appropriate use of antimicrobials	Update Guidelines for proper use of antimicrobials
		Promote research and development, and collecting genome information on isolated strains overseas
<u></u>	Research and Development	Introduce a Pull-incentive mechanism
	AMED CICLE, GARDP funding	Implement the pharmaceutical stable supply stability Initiative
	International Cooperation	Continue to hold annual Tokyo Conference on AMR
	Tokyo Conference on AMR One Health	ASIARS-Net, the Asian version of JANIS, Tricycle Project

Z9

#### Antibiotic use in Japan has declined since 2013.



#### Numerical goals of Japan's National AMR action plan (April 5, 2016)

Japan will reduce the use of oral antimicrobials cephalosporins, fluoroquinolones, and macrolides by half, the overall usage by 33% (by 2020)

#### Antibiotic usage in the medical field of world



# Push incentive (Japan) AMED CICLE, GARDP, CARB-X



https://gardp.org/wp-content/uploads/2023/10/JP\_Japan-funding-press-release-2023\_FINAL.pdf

Japan's practical measures against AMR



Policy	Measures
Drug price system	<ul> <li>2020: New antimicrobials for AMR were added as a subject to the premium system for the promotion of innovative drug discovery and resolution of off-label use, and their drug prices were maintained throughout the patent period.</li> <li>2022: Designated "Drugs for Specific Use" were subject to the premium system for the promotion of innovative drug discovery and resolution of off-label use and adjustment premium.</li> </ul>
<section-header></section-header>	<ul> <li>2018: Established a new additional fee for appropriate use support of antibiotics and a new additional fee for appropriate use support of antibiotics for children.</li> <li>2022: Established an additional fee for the improvement of infection control measures from the viewpoint of promoting infection control measures.</li> <li>2024: (1) Established new additional fees for antibiotic appropriate use, which has been added to both the additional fee for outpatient infection control improvement and the additional fee for infection control control improvement, to increase the use rate of AWaRe - Access Group antibiotics.</li> <li>(2) Expanded the scope of diseases covered by the additional fee for appropriate use support of antibiotics for children".</li> </ul>

# tal –

# Premium for promoting infection control measures

- Establish an Infection Control Team (ICT)
- Participate in the National surveillance network
- Establish a system to monitor the proper use of antimicrobials

### Additional premium for supporting antimicrobial stewardship program

- **Establish an Antimicrobial Stewardship Team** responsible for the following activities:
  - Monitoring infectious disease treatment and providing feedback to attending physicians
  - Optimizing the use of microbiological tests and clinical laboratory tests
  - Evaluating the appropriate use of antimicrobials
  - Educating and raising awareness among medical staff about proper use of antimicrobials
  - Reviewing the antimicrobial list in hospital
  - Receiving consultations from other medical institutions on the promotion of the proper use of antimicrobials

### Additional premium for appropriate antimicrobial use

 Optimize antimicrobial use to achieve <u>AWaRe Access(%) > 60%</u> or be in the <u>top 30% of AWaRe</u> <u>Access(%)</u> among J-SIPHE surveillance network hospitals

### Premium for inpatient medical management of specific infectious diseases

Implement IPC measures for patients with designated infectious diseases











- MHLW of Japan publishes official national antimicrobial stewardship guidelines: "Manual of Antimicrobial Stewardship," which describes appropriate outpatient and inpatient clinical management of infectious diseases from an AMS standpoint.
- The 3rd edition includes an additional chapter on the appropriate diagnosis & treatment of clinically important antimicrobial-resistant bacterial infections in inpatient settings.

#### Japan Surveillance for Infection Prevention & Healthcare Epidemiology System (J-SIPHE)

- "<u>J-SIPHE</u>" collects information about hospital AMR measures and returns the processed information to the participant hospitals and to the groups of participant hospitals.
- <u>3,110 hospitals</u>, which constitutes <u>38%</u> of all domestic hospitals, are utilizing "J-SIPHE" (as of May 28, 2024).



Data visualization is automatically generated upon data registration.

- 1. Various indicators are graphed to aid decision-making for AMR prevention & control.
- 2. Multi-hospital groups can be formed, and the data can be utilized for inter-hospital conferences (e.g., regional network).
- 3. The data can serve as a benchmark by comparison with metrics such as the overall average of participating facilities.

# Agenda

- 1. AMR and Its Historical Context
- 2. The Critical Role of the One Health Approach
- 3. Fundamental Challenges and Complexities in AMR
- 4. Political Actions and Achievements
- 5. The Achievement of Japan's National Action Plan

# 6. Future Prospects

### National Action Plans on AMR lack robust budgeting and coordination. (TrACESS Data, 2023)

More than 90% of countries:

developed multisectoral National Action Plans on AMR.

<u>But,</u>

▼ Only 1/4 of countries:

budgeted and financed with effective monitoring system.
 severely underfunded in most low- and middle income countries, which bear the greatest burden of diseases

#### ▼ Only 1/2 of countries:

had effective multisectoral coordinating mechanisms to implement NAPs.

In many countries:

inadequate engagement of animal and plant health, food production and environmental sectors in these mechanisms.

#### **Global Leaders Group on Antimicrobial Resistance**

#### **Established in November 2020**

Secretariat support is provided by the **Quadripartite Joint Secretariat (QJS) on Antimicrobial Resistance**, a joint effort by the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the World Health Organization (WHO), and the World Organisation for Animal Health (WOAH).

#### Member

GLOBAL LEADERS GROUP ON ANTIMICROBIAL RESISTANCE

Chair H.E. Mia Amor Mottley Prime Minister, Minister of Finance, Economic Affairs and Investment, Minister of National Security and the Civil Service, BARBADOS	Mr Jakob Forssmed Minister for Social Affairs and Public Health, SWEDEN		
Vice-chair	Ms Grace Fu		
Paediatric Surgeon, Member	Minister for Sustainability and		
of Parliament, Former Deputy	the Environment, Member of		
Prime Minister of Malta	Parliament, SINGAPORE		
Dr Ahmed Mohammed Obaid Al Saidi	Prof Dr Ernst Kuipers		
Former Minister of Health,	Minister of Health, Welfare and		
SULTANATE OF OMAN	Sport, NETHERLANDS		
Mr Mohammed Mousa Alameeri Assistant Undersecretary for the Food Diversity Sector, Ministry of Climate Change and Environment, UNITED ARAB EMIRATES	Dr Jamie Jonker Science and Programme Coordination Committee Chair, International Dairy Federation, USALivestock, BRAZILScience and Programme Coordination Committee Chair, International Dairy Federation, USA		
Ms Beatrice Atim Odwong Anywar	Ms Sunita Narain		
Minister of State for Environment,	Director-General, Centre for		
UGANDA	Science and Environment, INDIA		
Prof António Correia de Campos	Mr Yasuhisa Shiozaki		
Former Minister of Health, Professor	Former Minister of Health,		
Emeritus of Health Economics,	Labour and Welfare, Member of		
National School of Public Health, New	the House of Representatives,		
University of Lisbon, PORTUGAL	JAPAN		
Prof C.O. Onyebuchi Chukwu	Ms Jennifer Zachary		
Former Minister of Health, Professor of	Executive Vice President, General		
Orthopaedic Surgery, Alex Ekwueme	Counsel, MSD, Rahway, New		
Federal University Ndufu Alike, NIGERIA	Jersey, U.S.A.		
Dr Guilherme Antônio da Costa Júnior	Dr Jeffrey Scott Weese		
Federal Agricultural Auditor at the	Professor at the University of Guelph,		
Secretariat of Trade and International	Director of the Centre for Public Health		
Relations, Ministry of Agriculture and	and Zoonoses, Chief of Infection Control		
Livestock, BRAZIL	at Ontario Veterinary College, CANADA		
Prof Dame Sally Davies	Ms Dechen Wangmo		
UK Special Envoy on Antimicrobial	Former Minister of Health,		
Resistance, UNITED KINGDOM	BHUTAN		
Dr Maggie De Block	Prof Lothar H. Wieler		
Former Minister of Social Affairs and	Chair of the Digital Health Cluster,		
Public Health, and Asylum and Migration,	Hasso Plattner Institute and Prof of		
Member of Parliament. BEL GIUM	Digital Global Public Health, GERMANY		

#### **Mission statement**

The Global Leaders Group on Antimicrobial Resistance collaborates globally with governments, agencies, civil society and the private sector through a One Health approach to advise on and advocate for **prioritized political actions for the mitigation of drug resistant infections** through responsible and sustainable access to and use of antimicrobials.

> Global Leaders Group on AMR Report TOWARDS SPECIFIC COMMITMENTS AND ACTION IN THE RESPONSE TO ANTIMICROBIAL RESISTANCE

commendations for consideration by Member States in the outcome document the High-level Meeting on AMR in ptember 2024

### The Global Leaders Group on AMR made appeals to global leaders.



#### H.E. Mia Amor Mottley

Prime Minister, Minister of Finance, Economic Affairs and Investment, Minister of National Security and the Civil Service, BARBADOS

# GLOBAL LEADERS GROUP ON ANTIMICROBIAL RESISTANCE



**KISHIDA Fumio** Prime Minister's Office of Japan



March 1, 2023

His Excellency Mr. Fumio Kishida

We particularly note that there is a crisis in the research and development pipeline for new antibiotics and other antimicrobials. Unless G7 countries follow up past commitments by making a sustained and coordinated effort for the research and development of new antimicrobials - particularly antibiotics - with a strong access component, the world could face another pandemic with current medicines failing as our first line of defence.

The recent establishment of the Pandemic Fund and the inclusion of AMR within its scope, together with the new strategic approach to AMR of the Global Fund to Fight AIDS, TB and Malaria, and the Multi-Partner Trust Fund on AMR, are positive steps towards strengthening the world's capacity to prevent, detect and respond to current and future health threats. However, these mechanisms must be adequately financed and sustained to address their mandates related to AMR, particularly to support the implementation of multisectoral national action plans. These plans are severely underfunded in most low- and middle-income countries, which bear the greatest burden of disease and are at greatest risk of drug-resistant infections in humans, animals and plants. The G/ and the broader international community must commit far more seriously to fill the financing gaps to implement these plans.

With bold commitments to an adequately financed AMR response, the G7 can strengthen resilience to pandemics and the climate crisis, including those related to antimicrobial resistance, underpinned by innovation, equitable access and stewardship of our current medicines.

The Global Leaders Group stands ready to support your leadership of the G7 agenda on AMR.

Yours sincerely,

THE HON. MIA AMOR MOTTLEY Prime Minister Chair of the Global Leaders Group on AMR

March 1, 2023

PRIME MINISTER BARBADOS

Prine Minister Kishida

The COVID-19 pandemic has clearly shown that the world must focus much more on preventing, detecting and effectively responding to pandemic threats, which are increasing due to global warming and include the growing global burden of antimicrobial resistance (AMR). I am aware that the global health priorities of your G7 presidency are strengthening global health architecture, advancing universal health coverage, and promoting health technology and innovation, all of which are critically relevant to AMR.

AMR already threatens our ability to treat many common infections, with health and economic impacts. Indeed, it is associated with nearly 15 million deaths in the three years since COVID-19 emerged, and it will have even greater impact on human, animal and plant health, the environment, food security and economic development unless we take strong coordinated action to combat it today. We therefore urge you and the other G7 leaders to clearly recognize - as the United Nations Environment Programme does in its recent report - that AMR is a serious and growing pandemic threat that is closely linked to the climate crisis and must be addressed with the same level of urgency and commitment.

The Global Leaders Group (GLG) on AMR was established by the Quadripartite organizations (Food and Agriculture Organization, UN Environment Programme, World Health Organization, and World Organisation for Animal Health) to accelerate political action on AMR. We have noted with great appreciation the attention given to AMR during recent G7 discussions at Ministerial and Heads of Government levels. However, the only way to translate political statements into tangible action is to decisively allocate adequate and sustainable resources for a more robust response to AMR.

#### Barbados Prime Minister Mottley addressed the High-Level Meeting on Health COP28 (2023) (Dubai)



"We must recognize that antimicrobial resistance (AMR) is already one of the largest killer in the world, and it is expected to be <u>the number one killer</u> because 10 million people will die by 2050.

It is expected that *it will reserve a century of medical progress*, because going to the dentist or having a baby will become a high-risk.

In the year 2000, the world had <u>20 firms</u> doing research and development of AMR and looking for new antimicrobials, but today there are <u>4 firms</u>."

#### RECOMMENDATIONS FOR CONSIDERATION BY MEMBER STATES IN THE OUTCOME DOCUMENT OF THE HIGH-LEVEL MEETING ON AMR IN 2024 (March 2024)

(Global Leaders Group on AMR Report "Towards Specific Commitments and Action in the Response to Antimicrobial Resistance", March 2024)

- 1 Request the Secretary-General to urgently establish, in consultation with relevant stakeholders, an ad hoc group composed of governments, development banks, multilateral organizations, civil society and the private sector including philanthropy representatives, to define approaches and concrete measures needed for adequate, dedicated, predictable, and sustainable financing from domestic and external sources to address AMR, including research and development.
- 2 Existing financing instruments (including of the World Bank, Global Fund, AMR Multi-partner Trust Fund, Green Climate Fund, Pandemic Fund, Climate Health Fund, Global Environment Facility, Nature4Health, Global Biodiversity Framework Fund) should expand their scope to include AMR and/or increase investments to support implementation of multisectoral National Action Plans on AMR, especially in LMICs.
- 3 Request the Secretary-General, in close collaboration with the Quadripartite and other relevant stakeholders, to convene an Independent Panel on Evidence for Action against Antimicrobial Resistance by 2025, in a One Health context to monitor and provide Member States with regular reports on the science and evidence related to AMR, its impacts and future risks, and to recommend options for adaptation and mitigation.
- 4 The Quadripartite organizations should urgently update the 2015 Global Action Plan on AMR to ensure a robust, multisectoral One Health response and drive greater impact against AMR.
- 5 All countries should establish a national core multisectoral coordinating body for AMR with appropriate human and financial resources and mandate to engage relevant ministries with accountability, monitoring and reporting mechanisms.
- 6 Member States should formalize the standing Quadripartite Joint Secretariat on AMR as a key coordinating mechanism of the global One Health response to AMR, drawing on the mandates and roles of the Quadripartite and other relevant organizations in each sector.

- 7 All countries should strengthen human resources, diagnostic, laboratory, and other infrastructure capacity to support sustainable sector-specific and integrated surveillance systems and the use of data for action and, by 2030, report quality-assured AMR and AMU surveillance data through global surveillance systems (GLASS, ANIMUSE and InFARM).
- 8 By 2030, all countries should develop and have in place national plans and adopt measures to prevent contamination of the environment with antimicrobials and their metabolites, including from manufacturing, and integrate environmental dimensions into multisectoral National Action Plans on AMR.
- 9 By 2030, all countries should implement strategies in all sectors to prevent infections and reduce the need for antimicrobials across sectors, including infection prevention and control; water, sanitation and hygiene (WASH); vaccination, biosecurity and good animal husbandry practices; pollution control, waste and wastewater management; and ensuring equitable access to diagnostics and antimicrobials, and the development of alternatives to antimicrobials.
- 10 The GLG proposes the following **global targets** to catalyze action at national level:
  - Deaths caused by bacterial AMR: By 2030, reduce global deaths caused by bacterial AMR by 10%.
  - Antibiotic stewardship and responsible use in humans: By 2030, ACCESS group antibiotics comprise at least 80% of overall human antibiotic consumption.
  - Antimicrobial use in agri-food systems:

> By 2030, reduce the quantity of antimicrobials used in the agri-food system globally by at least 30-50% from the current level;

> By 2030, eliminate the use of medically important antimicrobials for human medicine in animals for non-veterinary medical purposes, or in crop production and agri-food systems for non-phytosanitary purposes.

Based on these global targets, the GLG recommends that all countries should develop national, outcome- oriented, sector-specific targets with clear goals and timelines, and follow up on their implementation.

#### Source https://www.amrleaders.org/resources/m/item/glg-report

#### 79th United Nations General Assembly (UNGA) High-Level Meeting on AMR (New York, 26 September 2024)





The Hon. Mia Amor Mottley, Prime Minister of Barbados made remarks during the UNGA High Level Meeting on AMR, on September 26, 2024;

"The biggest heavy lift is what must be raised to encourage research and development of antibiotics. <u>We have gone from 20 pharmaceutical</u> <u>companies doing research and development of antibiotics in the year 2000</u> <u>to only 4 pharmaceutical companies now</u>.

*"Antibiotics should be recognized as <u>a global public good with dedicated</u> <i>financing that goes beyond commercial investments."* 



WHO Director General Dr Tedros Adhanom Ghebreyesus made remarks;

"No country is immune to this threat, but <u>low and middle income countries</u> <u>bear the greatest burden</u>."

"While 90% of countries have developed AMR action plans, <u>only 11% of</u> <u>countries have allocated budgets to implement those plans</u>."

#### 79th United Nations General Assembly (UNGA) High-Level Meeting on AMR New York, 26 September 2024

Outcome: Global leaders approved a Political declaration, committing to a set of targets and actions.



#### **Outline of Political declaration**

- Reducing the estimated 4.95 million human deaths associated with AMR annually by 10% by 2030.
- Calls for sustainable national financing and US\$100 million in catalytic funding, to help achieve a target of at least 60% of countries having funded national action plans on AMR by 2030.
- The Quadripartite (FAO,UNEP,WHO,WOAH) will establish an independent panel for evidence for action against AMR in 2025, for supporting countries in efforts to tackle AMR.

#### Human sector (targets by 2030)

- At least 70% of antibiotics used for human health globally should belong to the WHO Access group antibiotics with relatively minimal side effects and lower potential to cause AMR.
- Targets around infection prevention and control (IPC), such as 100% of countries having basic water, sanitation, hygiene and waste management services in all health care facilities and 90% of countries meeting all WHO's minimum requirements for IPC programmes by 2030.
- There are also commitments on investments to facilitate <u>equitable access to and appropriate use of antimicrobials</u>, as well as on <u>reporting surveillance data on antimicrobial use and AMR across sectors</u>.

#### Agriculture and animal health, (targets by 2030)

- Reduce the quantity of antimicrobials used globally in the agri-food systems by prioritizing and funding the implementation of measures to prevent and control infections and ensuring prudent, responsible and evidencebased use of antimicrobials in animal health.
- This is to be achieved in the context of the WOAH list of priority diseases and FAO's RENOFARM initiative, as well
  as preventive strategies, including animal vaccination strategies, good husbandry practices, biosecurity, and WASH.

#### Environment (targets by 2030)

 Calls for increased research and knowledge on the environmental dimensions of AMR and for catalyzing actions to address key sources of antimicrobial pollution.

#### Independent Panel for Evidence for Action : Scientific Approach to Future AMR Challenges

UN General Assembly High-level Meeting

(September, 2024)

Political Declaration of the High-level Meeting on Antimicrobial Resistance

30. Invite the Quadripartite organizations<sup>\*</sup> to establish an <u>independent</u> <u>panel for evidence for action against antimicrobial resistance</u> in 2025 to facilitate the generation and use of multisectoral, scientific evidence to support Member States in efforts to tackle antimicrobial resistance, .....

Intergovernmental Panel on Climate Change (IPCC)

The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. (https://www.ipcc.ch/)

\* ①The World Health Organization (WHO), ②the Food and Agriculture Organization of the United Nations (FAO),
 ③the World Organisation for Animal Health (WOAH), ④the United Nations Environment Programme (UNEP).