STUDY GUIDE

WHO

World Health Organization

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Welcome to UNMUN 2026!

Esteemed delegates,

Greetings from the historic capital of Navarra, Pamplona. It is our greatest joy and pleasure to welcome you all to the World Health Organization committee in the 13th edition of UNMUN 2026. As the dais of this committee we look forward to meeting with each and every delegate and having fruitful debates regarding crucial issues that hold high potential of changing the course of the world.

Our foremost goal is to ensure a productive, respectful and, most importantly, enriching environment where all delegates feel empowered to discuss and create tangible solutions to this year's agenda, which is characterized not only for its high relevance in the international order, but also by its inherent complexity.

On the one hand, the delegates will engage in negotiations concerning our first topic: "Strengthening Research and Development Capabilities and Promoting Equitable Technology Transfer for Health in Least Developed Countries". This matter addresses the critical global health disparity, where Least Developed Countries, representing 1.5 billion people, account for less than 1% of world health research output. These fatal disparities create a vulnerability rooted in the lack of technology, dependence on imports and barriers like intellectual property. On the other hand, delegates will conduct negotiations regarding the second topic: "Combating antimicrobial resistance in Southeast Asia (the one Health Approach to Preserve Essential Medicines)". Antimicrobial Resistance is an arising issue that requires high emphasis. According to the World Health Organization antimicrobial resistance will become the leading cause of mortality in the world. This topic requires your utmost consideration and innovative but feasible solutions. Therefore, we remain at your disposal for any assistance needed during the discussions.

On behalf of the Dais, we sincerely thank you for your commitment to global health and look forward to seeing you soon in Pamplona!

Sincerely,

Mecnun Serhat Celebi
President

Lorena González Rivas
Co-President

Maria Hernández
Secretary

About the Committee

World Health Organization

The World Health Organization (WHO) is the UN's specialized health agency and the most important international authority on global public health. The World Health Organization (WHO) was founded on April 7, 1948, and its main office is in Geneva, Switzerland. Its goals are to promote health, keep the world safe, and help those in need. It now has 194 member states and runs six regional offices, one of which is the South-East Asia Regional Office (SEARO). This office is especially important for talks about antimicrobial resistance (AMR) in the region.

The World Health Organization (WHO) does a lot of different things. For example, it sets international health standards and norms, coordinates emergency responses during disease outbreaks, and gives technical support to help health systems in low- and middle-income countries get stronger. One of WHO's most important jobs is to bring together governments, scientists, civil society, and international organizations to work on health problems that no one country can solve on its own. The International Health Regulations (2005) are a great example of this. They set the rules for the whole world to follow when it comes to finding, reporting, and dealing with public health emergencies of international concern.

The World Health Organization (WHO) is in charge of the Global Action Plan on Antimicrobial Resistance (2015) and runs the Global Antimicrobial Resistance and Use Surveillance System (GLASS), which collects and analyzes data from member states to keep an eye on trends in resistance and antibiotic use. The World Health Organization (WHO) also works with the Food and Agriculture Organization (FAO), the World Organisation for Animal Health (WOAH), and the United Nations Environment Programme (UNEP) in a "One Health" approach that connects the health of people, animals, and the environment. Delegates in Model United Nations need to know that WHO is not a supranational authority but a technical agency. It doesn't make laws; it gives advice, evidence, and helps things run smoothly.

The annual World Health Assembly (WHA) is where Member States make the most important decisions. Resolutions are passed by a majority vote or by consensus. This means that WHO can only do its job well if countries work together, have the political will, and get enough money. In short, WHO is the main place where people talk about global health priorities, coordinate strategies, and get resources moving. This makes it an important player in the fight against AMR and in keeping health security safe around the world.

Topic A:

Strengthening research and development capabilities and promoting equitable technology transfer for health in least developed countries

I. BACKGROUND

There are currently 45 countries being listed by the UN as LDCs,[1] which translates to over 1500 million inhabitants being left behind in an evolving international system in which constant innovation in technological, intellectual and scientific fields cannot be foreshadowed.

Furthermore, Least Developed Countries face severe and distinct health challenges as a result of several obstacles such as weak economies, high vulnerabilities to shocks and natural disasters and inadequate healthcare systems. With limited access to medical technology due to barriers like intellectual property and legal frameworks, how could they ever improve their situation?

Scope of the problem

Least Developed Countries' difficulties are worldwide in nature rather than independent. Though LDCs account for less than one percent of world health research output, they include around twelve percent of the total population, Across areas, this imbalance is noticeable: Sub Saharan Africa battles recurring epidemics like Ebola,[2] South Asia with quick population expansion and poor infrastructure, the Pacific Island States with some of the world's highest prevalence of non-communicable diseases[3] like diabetes and Caribbean with weak systems susceptible to natural catastrophes. Despite the diversity of these challenges, certain common threats which show how urgently R&D capacity has to be boosted and fair technological transfer encouraged, run throughout: poor research and development (usually less than 0,5%), reliance on imported drugs and inadequate local technological adaptation capacity.

II. KEY DEFINITIONS

Least Developed Countries (LDCs): A list of 45 countries defined by the United Nations due to having the lowest indicators of socioeconomic development, measured by income, human assets and economic vulnerability.

Research and Development: The process through which organizations generate new knowledge to either develop or enhance their products. This procedure is often in collaboration

[1] *Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gambia, Guinea, Guinea- Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Rwanda, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Yemen and Zambia.*

[2] Ebola Disease | WHO | Regional Office for Africa, 2025.

[3] (Addressing NCDs in the Pacific Islands, 2025)

with universities and research institutions due to their advanced facilities and resources. Some examples of R&D: Pharmaceuticals, Manufacturing and Technology.

Technology Transfer: "the process of moving and applying new technology, knowledge, inventions, and other intellectual property from one entity to another, such as from research institutions to industry, with the goal of commercialization, product development, and broader societal or economic benefit."

Intellectual Property Rights: exclusive, legally protected rights granted to creators for their original, intangible creations, such as inventions, literary works, symbols, and designs, for a specific period. These rights allow creators to control the use of their intellectual assets and prevent others from unauthorized use or duplication, ensuring they can benefit financially and receive recognition for their work.

TRIPS Agreement: The Trade-Related Aspects of Intellectual Property Rights is a treaty established under the World Trade Organization which sets minimum global standards for intellectual property protection in trade-related areas. Despite their effectiveness when incentivizing innovation by protecting inventions, it can also create barriers for LDCs since they are implied to import often unaffordable lifesaving technologies.

Compulsory Licenses: mechanisms which authorise states or third parties to make use of a patent-protected invention without the consent of the holder, while also granting them proper compensation, usually in the form of royalties.

Parallel imports: when a patent-holder sells its product in foreign land, their exclusive right to control that specific item is considered to be exhausted. In other words, once the product is sold in foreign land, the holder loses its right to claim that it has been resold. However, they still have total control over the manufacturing of the goods.

In this environment, third parties or 'intermediaries' emerge: they legally buy the item at a lower cost due to it not being from the 'original source', to then sell it to LDCs or developing countries. This allows these nations to access pharmaceuticals at much affordable prices.

Doha Declaration: a WTO consensus affirming that the TRIPS agreement should not prevent members from protecting public health and ensuring access to medicines, explicitly recognizing the right of countries to use TRIPS flexibilities in order to address public health setbacks.

Capacity Building: the ongoing process of improving and strengthening the skills, knowledge, resources, and systems of individuals, organizations, and communities to achieve goals, perform tasks effectively, and adapt to change.

III. PROBLEM STATEMENT/ DEVELOPMENT OF THE ISSUE

Least Developed Countries (LDCs) face significant barriers in health research, development and access to medical technologies. Although global health technology remains in constant evolution, these innovations are often inaccessible to LDCs due to multiple difficulties, creating a gap which contributes to the strengthening of the vulnerability that these countries already face. Nevertheless, WHO's constitution states that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.

Trying to help LDCs meet this standard, the World Health Organization adopted the Strategy on Research for Health in 2010: a global framework designed to strengthen research capacity and encourage world-wide innovation. While this strategy provides valuable guidance, it is still hard to implement in most LDCs: problematics such as the barrier of technology transfer, lack of infrastructure, limited research and development capacity, global health inequities, weak governance, insufficient coordination between international actors and fragmented health systems keep LDCs unable to build self-reliant health systems and therefore, dependent on external aid. However, equitable technology transfer is not only about vaccines, but diagnosis, medical equipment, treatments and even disaster preparedness tools.

Furthermore, research shows that strict patent regimes like TRIPS might limit innovation in LDCs, highlighting that its current approach does not accurately reflect the developmental reality in most least developed countries.[4] Although some flexibilities, like extended deadlines for LDCs, have been created to try to help these regions produce or import patented technologies with the intention of meeting public health needs, the high cost of either producing or importing these technologies challenges LDCs' development on the matter, despite WTO's intention to help.

Even though it is key to strengthen both research and development in order to build a strong foundation for the promotion of equitable technological access, some manufacturers claim that it is cheaper to import drugs than to invest in R&D capabilities.[5]

a) Challenges:
    a. The exemptions under TRIPS Agreement could be hard to implement
        i. Critics argue that big pharma's resistance to these mechanisms, arguing that they undermine incentives for innovation, slows down technology transfer. As a result, countries that try to issue compulsory licenses often face pressures from wealthier nations that fear damaging their domestic industries.

[4] (Gnangnon, 2023)
[5] (Holland & Ndaferankhande, 2016)

ii. Bureaucratic and legal complexity contributes to turn TRIPS flexibilities into a time-consuming and highly technical resource which often takes years to be implemented.
iii. The lack of a clear and uniform definition[6] of what qualifies as "technology transfer" has allowed developed countries to overstate their efforts.
iv. Research has shown that even though 232 programmes which presumptively intended to boost technology transfer were reported, only 22% could actually be classified as genuine technology transferred aimed at least developed countries.[7]

b. Evergreening of patents[8]: The attempt from pharmaceutical companies to try and extend the life of a drug patent by claiming minor, often non-innovative changes and then filing for a new patent, with the intention of prioritising profits, which can delay technology transfer.
c. Weak governance:
    i. Lack of infrastructure
        1. Insufficient funding destined for research and development: a great amount of Least Developed Countries still invest less than 0,5% of their GDP in research and development capabilities (R&D).
        2. Some of the listed countries have not developed an official National Health Policy.
d. Voluntary initiatives being prioritized over binding commitments for technological transfer during health emergencies which cannot rely on goodwill.
e. Brain Drain: the lack of human capital.
f. Need for sustainable funding (too reliable on short-term donor funding)
    i. Need to improve both education and innovation ecosystems (universities directly involved in research and development)
g. Barriers to technology transfer

IV. ILLUSTRATIVE CASES

a. The danger of relying on imports: Malawi.

Despite decades of having received external aid to counter fight their high HIV rates, like life-saving antiretroviral therapies (ARVs) imported from India or South Africa, Malawi has almost no domestic pharmaceutical production capacity. As a result, when the supply chains are disrupted, thousands of patients are left without medication.

[6] (UNCTAD, n.d.)
[7] (Gnangnon, 2023)
[8] (Törnvall, 2013)

b. The outcome of insufficient funding on research and development: Haiti and the Democratic Republic of Congo.

Due to the earthquake that took place in 2010, thousands of Haitians faced a devastating cholera outbreak. Because of not having enough research and development facilities nation-wide, the country was entirely reliant on external donations which arrived too late. Nowadays, Haiti still faces shortages on essential medications like insulin and painkillers, but without a solid response to these insufficiencies, its population will still be left behind.

Over the past year, the growing insecurity and instability have disrupted the supply chain[9] and impacted the availability of essential medicines needed to sustain operations of public health facilities, surgical procedures, maternal and neonatal health and the management of chronic non-communicable diseases. Due to escalating violence, access to healthcare services remains extremely limited, with only 10% of health facilities fully operational.

In a similar way, the Democratic Republic of Congo has also illustrated the danger of not having domestic R&D capabilities, despite being one of the wealthiest nations in mineral terms.[10] During multiple Ebola crises, the republic did not have the resources to produce nor test medicines locally, inevitably leading to relying on importations and its trade routes. Congo is one of the best existing examples of the Paradox of Plenty: although rich in resources, it still hasn't developed a solid investment fund in R&D capabilities despite having multiple health emergencies nation-wide, since the revenue that comes from mineral resources undergoes a deeper problem: corruption. This issue is not other than a structural problem which contributes even more to global inequity and to one of LDCs' greatest concerns: brain drain.

c. The need for resilience and disaster preparedness: Nepal.

After the 2015 earthquake, Nepal struggled to import portable medical shelters and water purification systems: technologies that were available globally but arrived significantly slower due to the lack of transfer agreements. This demonstrates that natural disasters illustrate that access to disaster preparedness technologies is just as important as access to treatments and medicines.

d. Noncommunicable diseases after natural disasters: the Caribbean Region

After two hurricanes hit the Caribbean area in 2020, researchers found out that 30% of deaths were due to poorly controlled noncommunicable diseases. Setbacks like access to medication, acute care services, reliance on ad hoc volunteers and outside aid only accentuate the disparity between regions, fostering the barrier that LDCs struggle to overcome.

[9] (PAHO Sends Critical Medicines and Health Emergency Supplies to Haiti Amid Ongoing Humanitarian Crisis, 2025)
[10] (Discovery Alert, 2025)

In addition, due to the advance of climate change, experts point out that the extreme conditions that the Pacific faces will only become more pronounced. Since certain fractions of the population are extremely vulnerable to these conditions because of the higher prevalence of comorbid conditions, the use of certain medications and limited mobility, the vital need to train disaster response teams to manage noncommunicable diseases exacerbated by extreme weather events has been emphasized.

V. WHAT HAS BEEN DONE ALREADY?

International efforts

C-TAP (COVID-19 Technology Access Pool): an initiative launched by WHO in 2020 to share knowledge, patents and data for diagnosis, treatments and vaccines, enabling some LDCs manufacturers to access technology that otherwise would have been restricted. However, despite the initial intention of this project, due to its non-bindingness and a lack of incentives and contributions, it became more symbolic than a real solution.

WHO's mRNA Vaccine Technology Transfer Programme: Regional centers were set up to produce vaccines on a local scale, providing technical training, infrastructure and knowledge transfer in between LDCs. Despite the delay in the response, these hubs represent a promising future for African biotechnology.

TRIPS flexibilities and Doha Declaration on TRIPS and Public Health and on Financing and Development: affirmed developing countries' right to public health and access to essential medicines, calling for a more equitable, sustainable and stable global financial system.

Despite resisting broad waivers, the United States, European Union and Japan, home to multinational pharmaceutical research centers, have endorsed the need to find solutions to the limited access to life-saving medicines, and therefore, ensure worldwide distribution.

National efforts

National innovations to support research, training and knowledge transfer and international support and funding.

- PHIM (Public Health Institute of Malawi)
- IDI (Infectious Diseases Institute)
- Rwandan national innovation funds to support local medical startups.
- UN technology bank for least developed countries.

Malawi's Essential Health Package (2004): The Malawi government introduced this initiative to ensure that people had a cost-effective package of essential health services, covering 11 common diseases, including malaria and HIV.

India's advocacy for making essential pharmaceuticals accessible:

- The Indian Patent Act (1970): By both introducing a process patent for chemicals and by shortening the life of patents, the Republic has achieved to produce and deliver medicines at a much lower cost, benefiting a great number of countries, such as Brazil, Malawi and Thailand.[11]
- Indian patent law[12] (section 3(d)): an attempt to stop evergreening by requiring enhanced efficacy for new forms of known substances.

The adoption of an official national health strategy by some LDCs

VI. THE IMPACT OF COVID-19 ON LDCS

The COVID-19 pandemic highlighted the vulnerabilities of least developed countries in accessing essential health technologies. While wealthier nations were constantly developing vaccines at record speed, many LDCs faced remarkable delays in receiving dosages, leaving their populations directly exposed to the infectious disease.

Even when legal mechanisms like TRIP flexibilities existed, countries often lacked the foundation needed to produce or distribute vaccines effectively. Even though initiatives such as the WHO's C-TAP and regional mRNA hubs located in Africa demonstrated promising solutions, the pandemic made it clear that without a strong base, LDCs will remain disadvantaged in R&D and technology transfer.

During the pandemic, India and South Africa proposed a temporary waiver of patent protections under the WTO's TRIPS Agreement to expand vaccine access.[13] While supported by many developing countries and wealthier nations, it also resisted broad implementation from actors with strong pharmaceutical industries like the United States, the European Union, Japan and Switzerland, illustrating that intellectual property is not merely a technical issue but also a deeply political matter that significantly influences shaping who ultimately gets access to lifesaving technologies.

VII. MAIN ISSUES TO BE DISCUSSED:

- How can nations support the development of health infrastructure in weak democracies? What role should international actors, regional hubs and universities play in capacity building?
- Are current TRIPS flexibilities enough to guarantee access to medicines, or do LDCs need stronger tools to overcome patent barriers?

[11] (Holland & Ndaferankhande, 2016)
[12] (Strong IP Laws Prevent So-called "Evergreening" of Patents to Enhance Access to TB Drugs in India, n.d.)
[13] (World Trade Organization, 2020)

- How should the international community balance pharmaceutical companies' right to profit with the urgent need for affordable medicines and resources?
    - How can the resistance from some developed nations with strong pharmaceutical industries (US, EU, Switzerland, Japan) be addressed into WTO negotiations?
- How can LDCs train and retain health workers and researchers taking into consideration that better opportunities exist abroad?
- Should TRIPS' monitoring mechanism article 66.2 be reformed to ensure real and traceable technology transfer?
- How can LDCs move from relying on short-term donor funding towards creating a long-term approach to encourage financing for R&D?
    - If importing medicines is cheaper for LDCs in the short term, how can they still build long-term independence in health technology?
    - Why do most LDCs still invest less than 0,5% of their GDP in research and development?

VIII. QUESTIONS TO BE ANSWERED IN THE RESOLUTION

- How can intellectual property and profits be balanced with humanitarian needs without destroying innovation and investment initiatives?
    - Should technology transfer remain voluntary, or should the international community create binding commitments during health emergencies?
- How can LDCs be supported to invest a sustainable portion of their GDP into research and development, without undermining other essential sectors?
    - Should LDCs focus on building their local production facilities, or would a regional approach be more suitable/effective?
- How can lessons from the COVID-19 Pandemic be institutionalized so that the same inequalities don't ever take place again?
- What measures should be in place to make sure that funds are used effectively and avoid corruptive behaviours?

IX. DOCUMENTS OF INTEREST

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Topic B:

Combating Antimicrobial Resistance (AMR) in Southeast Asia (The one health approach to preserve essential medicines)

I. INTRODUCTION

Antimicrobial Resistance is an rising issue that threatens global public health and development. In 2019, bacterial resistance was directly associated with approximately 1.27 million deaths worldwide and contributed to nearly 5 million deaths in total. A primary factor fueling this crisis is the inappropriate and excessive use of antimicrobial agents in human health, veterinary practice, and agricultural production, which accelerates the development of resistant pathogens. AMR affects countries in every region, regardless of income level; however, low- and middle-income countries are disproportionately impacted, as poverty and inequality intensify both the causes and the consequences of resistance. This challenge places at risk many of the gains of modern medicine, rendering common infections increasingly difficult to treat and complicating essential medical procedures such as surgery, caesarean sections, and cancer chemotherapy.

The global community also faces a dual crisis of limited antibiotic development and unequal access to existing treatments. Current research and development pipelines are insufficient to address the rising levels of resistance, while significant disparities persist in the availability of vaccines, diagnostic tools, and essential medicines across regions.

In addition to human suffering, AMR carries substantial economic repercussions. According to estimates from the World Bank, antimicrobial resistance could generate an additional US$ 1 trillion in healthcare costs by 2050 and cause global GDP losses ranging from US$ 1 trillion to US$ 3.4 trillion annually by 2030.

To respond effectively, priority areas of action include strengthening infection prevention to reduce inappropriate antimicrobial use, guaranteeing universal access to accurate diagnostics and effective treatment, and fostering international cooperation in research, innovation, and surveillance systems. Such measures are essential to ensure equitable access to novel vaccines, diagnostics, and therapeutics while protecting global health security and sustainable development.

II. KEY CONCEPTS

Microorganism: a living thing that is very small to be observed with the naked eye and requires a microscope for visualisation.

Antimicrobials: substances that are used to inhibit the growth of microorganisms including bacteria, viruses and fungi in order to treat infection.

Antimicrobial Resistance: occurs when bacteria, viruses, fungi and parasites no longer respond to antimicrobial medicines.

Mutation: a change in the DNA sequence of an organism.

III. SUMMARY ON MECHANISMS OF ANTIMICROBIALS

Antibiotics: current medications target various components of a bacteria. The classification is based on their antimicrobial activity. The main groups of antibiotics include; cell wall synthesis inhibitors, cell membrane depolarizers, protein synthesis inhibitors, nucleic acid synthesis inhibitors and inhibitors of metabolic pathways.

Antivirals: antiviral drugs mainly target the replication cycle of a virus blocking the virus from replicating itself.

Antifungals: these medications mainly target a component named ergosterol which is found in the wall of fungi.

IV. HISTORY OF ANTIMICROBIAL RESISTANCE

Antimicrobial resistance (AMR) isn't new; it's just a natural result of how microbes change over time. Paul Ehrlich warned as early as 1907 that pathogens could develop and spread resistance. By the 1940s, before penicillin was widely available, scientists had already found bacteria that could break it down. The next few decades saw a "antibiotic boom," but each new class of drugs was quickly followed by resistant strains.

Methicillin-resistant Staphylococcus aureus (MRSA) appeared in 1961, vancomycin resistance in the 1990s, and colistin resistance as recently as 2016. These scientific and historical viewpoints, derived from Davies et al. (2010) and Hunt and Kates (2024), demonstrate that antimicrobial resistance (AMR) is both longstanding and exacerbated by human misuse, especially the prevalent over-the-counter accessibility and agricultural application of antibiotics.

AMR has become a serious public health problem in Southeast Asia because people are self-medicating too much, infection control is bad, drugs are fake or of poor quality, and antimicrobials are used too much in livestock and aquaculture. There are a lot of resistant strains of tuberculosis, malaria, and Escherichia coli, and trade and travel across borders make it easier for these organisms to spread throughout the region. The World Health Organization has named Southeast Asia as one of the most vulnerable places in the world because it has weak laws and a lot of infectious diseases. This makes AMR not only a health problem but also a development and economic problem.

V. CURRENT STATUS OF AMR IN SOUTHEAST ASIA

Antimicrobial resistance (AMR) has emerged as a critical health and development challenge in Southeast Asia. There are several causes to the problem: a) abundance of infectious diseases; b) easy access to antibiotics without a prescription at community pharmacies; and c) the high use of antimicrobials in livestock and aquaculture.

Even though surveillance has gotten better and every country in the region now has a national AMR action plan, the use and regulation of antibiotics is still very different from country to country. Some countries use too many antibiotics, while others have trouble getting good medicines. Due to this imbalance, resistant strains of bacteria, such as carbapenem-resistant Enterobacterales and fluoroquinolone-resistant Escherichia coli, are able to grow and spread in both hospitals and the community. The emergence of plasmid-mediated colistin resistance is especially troubling, as it has been found in humans, animals, and the environment in Southeast Asia. This makes what was once thought to be a last-resort antibiotic less effective. The area also has drug-resistant tuberculosis and malaria, which make the problem of AMR even worse and makes it harder to find ways to address it. The economic and social effects are considerable , with AMR threatening to lower productivity, raise healthcare costs, and make it harder to reduce poverty.

The area has also started to respond in a more organized way at the same time. The Global Action Plan on AMR has been put into action by all 11 countries in the WHO South-East Asia Region.

- Thailand has become a leader in this area by putting in place a comprehensive "One Health" strategy that sets measurable goals for both human and animal antibiotic use, increased surveillance capacity, and raised public awareness.
- ASEAN has also set up a system for monitoring and evaluating the region, with a focus on how antimicrobials are used in food systems, aquaculture, and agriculture.

The Quadripartite partnership of WHO, FAO, WOAH, and UNEP is working with governments in Southeast Asia to improve infection prevention, regulate the use of veterinary antibiotics, and keep an eye on antimicrobial residues in the environment. Some aspects that remain of utmost importance are making sure that antibiotics are only available with a prescription, strengthening stewardship programs in primary care, increasing the number of tests that can be done in a lab, improving water and sanitation systems to lower the risk of infection, and stopping the use of medically important antimicrobials in animals for non-therapeutic purposes. Southeast Asia is at a crucial point right now. There have been improvements in governance and planning, but more needs to be done to fill in the gaps in implementation, especially in informal healthcare settings and agricultural systems. This is especially important now that the world has promised to reduce deaths related to AMR by 2030. The next ten years will show if the region can turn the tide on AMR or if health and economic problems will get worse.

VI. MAIN ACTORS ON AMR IN SOUTHEAST ASIA

Thailand
Thailand has been recognized as a regional leader because of its detailed National Strategic Plan on Antimicrobial Resistance (2017–2021, extended to 2023–2027). The plan sets specific goals, such as lowering the use of antimicrobials in people and animals, improving surveillance, and raising public awareness. The government took a strong "One Health" approach, addressing human, animal and environmental factors to combat AMR.

Indonesia
Indonesia has put in place a national AMR action plan that focuses on monitoring, smart use of antibiotics, and strengthening laboratory networks. Reducing the sale of antibiotics without a prescription and adding AMR education to community health programs have been two of the main goals.

India
While not a member of ASEAN, it is a key member of the South-East Asia Regional Office (SEARO). India started its National Action Plan on AMR (2017–2021), set up a national AMR surveillance network, and made it illegal to use colistin in animals that produce nourishment. India is also a big player in policy talks at the regional and global levels because of its pharmaceutical industry's size.

Myanmar
Myanmar's national action plan primarily aims to strengthen laboratory-based surveillance systems and infection prevention and control (IPC) measures. With support from the Fleming Fund and the World Health Organization (WHO), the country is enhancing the capacity of hospital laboratories and veterinary services to systematically monitor, analyze, and report antimicrobial resistance trends.

Nepal
Nepal has made a national AMR plan that focuses on better diagnostics, including AMR education in medical training, and lowering the amount of antimicrobials that are misused in both people and animals.

Sri Lanka
Sri Lanka has made efforts to make AMR a part of its national health priorities by improving how prescriptions are written, setting up stewardship programs in tertiary hospitals, and controlling how antibiotics are sold in pharmacies.

Bangladesh

Bangladesh made a National Action Plan on AMR (2017–2021) and has focused on raising awareness, strengthening surveillance, and reforming the veterinary sector, with a focus on reducing the use of antimicrobials in poultry and aquaculture.

VII. SUPPORTING MATERIALS AND REFERENCES

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