



**IAFSW**  
The International Association  
for the Future STEM Workforce  
สมาคมเพื่ออนาคตของประเทศไทย

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MICROBIOLOGY IN SCHOOLS ADVISORY COMMITTEE

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## **Report on the Joint IAFSW-MiSAC Competition 2024:**

### **Neglected Tropical Diseases and Climate Change**

The International Association for the Future STEM Workforce (IAFSW), the Microbiology in Schools Advisory Committee, UK (MiSAC), and the SEAMEO Regional Centre for Sufficiency Economy Philosophy for Sustainability (SEAMEO SEPS), have organized the **Joint IAFSW-MiSAC Competition 2024 on Neglected Tropical Diseases and Climate Change** which is a part of the 2024 MiSAC UK Annual competition “Neglected Tropical Diseases and Climate Change” and extend the target audience to grade 7-9 students from ASEAN plus 3 countries. The competition aims to heighten awareness among teenagers about the significant impact of neglected tropical diseases (NTDs) on global health and their correlation with climate change.

The Joint IAFSW-MiSAC Competition 2024 is partly sponsored by Thai Nakorn Patana. IAFSW has also received technical assistance from medical experts, who have provided knowledge relating to NTDs and climate change through a series of six video clips, including:

- "Combating Neglected Tropical Diseases: A Call to Action" by Dr. Bernard Pécoul, Prince Mahidol Recipient, the founder of Drug for Neglected Diseases Initiative (DNDi)
- "Unveiling the Threat: Rabies and Neglected Tropical Diseases" by Prof. Terapong Tantawichien, MD, Queen Savabha Memorial Institute, Thai Red Cross Society, Thailand
- "Understanding Dengue Fever: Insights from an Infectious Diseases Specialist" by Prof. Amorn Lelarasamee, the President of the Corporation Alliance Network for Dengue Zero MOU



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- "Navigating Leishmaniasis: Understanding the Parasitic Disease" by Dr. Phubeth. Yamphan, National Institute of Health (NIH), Department of Medical Science, Ministry of Public Health, Thailand

- "Understanding Leprosy: Causes, Symptoms, and Treatment" by Dr. Jumpol Tantiwongsakit, MD, Raj Prachasamsai Institute, Department of Disease Control, Ministry of Public Health, Thailand

- "Decoding Snake Bites: Expert Insights and Prevention Tips" by Assistant Professor Suchai Suteparuk, MD, Queen Savabha Memorial Institute, Thai Red Cross Society, Thailand

These IAFSW offerings are aimed at enhancing understanding among youth and providing important information about NTDs to the general public.

The Joint IAFSW-MiSAC Competition was announced through various channels, including the IAFSW website, Facebook, and the SEAMEO school networks in ASEAN. The competition website was also linked to the websites of the Office of the Basic Education Commission, Thailand (OBEC), the Institute for the Promotion of Teaching Science and Technology, Thailand (IPST), and the Korea Foundation for the Advancement of Science & Creativity (KOFAC).

The competition received 51 entries from 24 schools in Brunei, Indonesia, the Philippines, and Thailand. Of these, 34 entries were qualified, while the remaining 17 were not, due to various reasons, which are not aligned with the competition requirement such as:

- Submissions not aligning with the NTD themes
- Presentations lacking a clear pathogen focus (e.g., snake venom)
- Entries submitted solely in text format without accompanying illustrations



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- Submissions two NTDs on a single entry
- Entries submitted on more than one sheet of paper

The most prevalent topics of interest among the submissions were Rabies, Filariasis, and Dengue.

The judging process took place both on-site at the IAFSW headquarters, the Edupark office in Bangkok Thailand, and online through Zoom. The judging panel consisted of Dr. Margaret Whalley (MiSAC Committee and IAFSW International Advisory Board Committee, Chair), Dr. Mark Windale (IAFSW International Advisory Board Committee), medical experts including Dr. Jumpol Tantiwongsakit, MD and Dr. Phubeth Ya-Umphon also Ms. Piyapa Sungavatin (SEAMEO SEPS), as well as executive members and officers of IAFSW.

The entries were evaluated based on the following criteria:

1. Technical Content Completeness (40%)
2. Utilization of MiSAC-IAFSW Top Tips (30%)
3. Communicability of Illustrations (30%)

The top three winners were determined based on the cumulative scores. In addition, another three entries were recognized with commendations for their special characteristics, including scientific information, visual impact, and innovation.

The judges were impressed with the overall quality of the entries, and even though most of the submissions used information from the public website, the references were properly cited. The students demonstrated creativity and the ability to design informative and visually appealing webpages.



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In conclusion, the competition successfully achieved its aim of developing an understanding among teenagers of the impact of NTDs on global health and how climate change may affect their distribution. This aligns with the mission of IAFSW to empower and prepare students for success in the ever-changing STEM workforce, particularly in medical science careers, while contributing to the achievement of the Sustainable Development Goals (SDGs), especially SDG3 (good health and well-being), SDG13 (climate action), and SDG17 (partnerships for the goal).

The Joint IAFSW-MiSAC Competition would not have been a success without the continuous guidance and support of Dr. Margaret Whalley, the MiSAC Committee and IAFSW International Advisory Board Committee. Her expertise and invaluable suggestions played a crucial role in the overall design and implementation of the competition.

As a partnership between MiSAC and IAFSW, the Joint IAFSW-MiSAC Competition will be held in 2025, with the topic focusing on Human Fungal Diseases and Antifungal Drug Resistance. Building on the lessons learned from this year's competition, there are several areas that can be improved for better results: earlier planning to ensure sufficient time for execution, securing sponsorship during the early stages, aligning the competition timeline with the academic calendars of participating ASEAN plus 3 countries, expanding the distribution of information through more in-country and regional nodes, and reviewing and modifying the rules and regulations of the MiSAC competition to ensure they are practical and manageable for IAFSW's management and participation. By addressing these areas for improvement, the Joint IAFSW-MiSAC Competition in 2025 can be better positioned for success and greater participation from ASEAN plus 3 students.