### Community engagement with the Orang Asli communities in Malaysia Praveena Rajasegaran<sup>1</sup>, Zubaidah Ya'cob<sup>1</sup>, Khoo Jing Jing<sup>2</sup>, Loong Shih Keng<sup>1</sup>, Benjamin L. Makepeace<sup>2</sup>, Sazaly Abu Bakar<sup>1</sup>

Tropical Infectious Diseases Research and Education Centre, Universiti Malaya<sup>1</sup>; Institute of Infection, Veterinary and Ecological Science, University of Liverpool<sup>2</sup>

## INTRODUCTION

The Southeast Asian nation of Malaysia is renowned for its multiculturalism with the three largest ethnic groups of Malays, Indians, and Chinese. Orang Asli was the first population to establish in Peninsular Malaysia, followed by people of various ethnicities. The Orang Asli are the ethnically diverse descendants of Peninsular Malaysia's first colonizers, some of whose ancestry dates back more than 10,000 -15,000 years. In line with our research goal to understand the transmission of vector-borne diseases among the rural and remote populations in Malaysia, we took the opportunity to conduct engagement activities with the underserved Orang Asli.



The programs were conducted on October 27<sup>th,</sup> 2018 in one rural village in Bota Kanan, Perak, and on September 30<sup>th</sup>, 2021 in three remote villages at Muadzam Shah, Pahang. We aimed to transfer knowledge on 1) infectious diseases carried by arthropod vectors and animals, including pets, 2) hygiene practices and associated diseases caused by being barefoot, using contaminated food/water, and 3) basic disease prevention practices.



A) Orang Asli communities of Semai tribe from Bota Kanan Village in Perak. B, C, D) Orang Asli communities of Jakun tribe from Kampung Teraling, Kampung Jenit and Kampung Cerampak in Pahang.

Map of Southeast Asian countries indicates the location of Peninsula Malaysia and four Orang Asli villages in Perak and Pahang.



#### Activities conducted in the rural village in Perak (2018)



A) Pictorial poster presentation on vector-borne diseases to Orang Asli participants. B, C) Demonstration of effective hand-washing techniques using hand soap and a fluorescent powder simulating contamination of hands with germs. D) Activity involving the counting of ectoparasites drawn on a laboratory coat. E, F) Orang Asli participants observe the real vector arthropod specimens under binocular dissecting microscopes.



In comparison with the rural village from Perak, the three Orang Asli villages in Pahang were identified as the most underserved communities dealing with poor hygiene, sanitation, and health concern. The highlighted issues include scarcity of clean water, poor hygiene practices, energy poverty, livelihood challenges, poor diet and nutrition, and high illiteracy rates and dropouts.

Our interview session with the OA participants and NGO members revealed that approximately 30% of the villagers have experienced vector-borne diseases, especially malaria and Chikungunya. This two-way interaction also discovered that 99% of participants had experienced being bitten by more than one vector, primarily by mosquitoes followed by ticks and mites. Additionally, young children were found to be affected by soil-transmitted diseases.



#### Activities conducted in three remote villages in Pahang (2021)



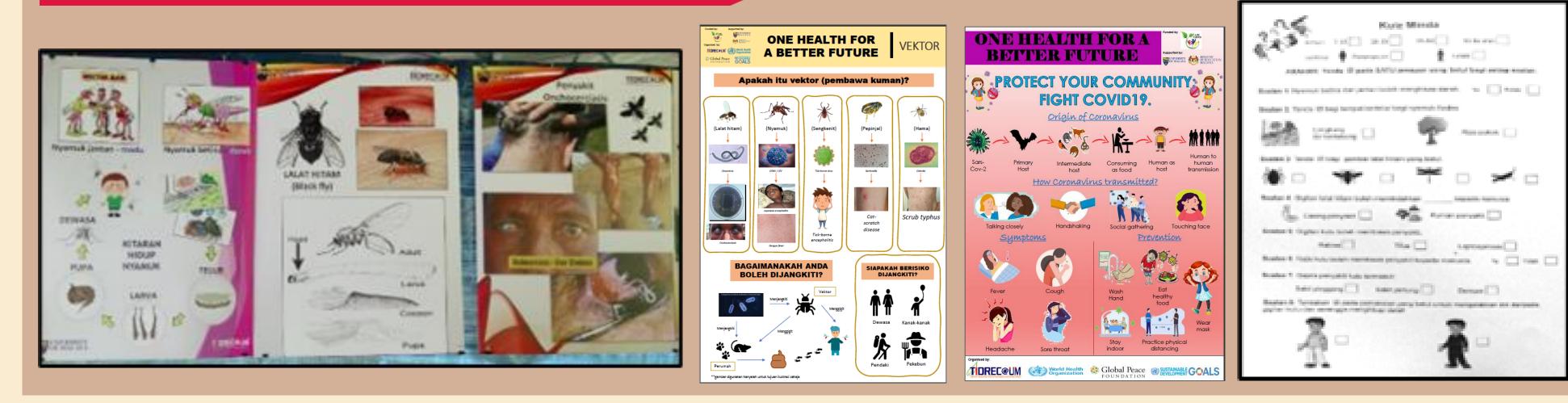
A) Pictorial poster presentation on hygiene practices to the Orang Asli participants. B) Deworming activity using anthelmintics approved by the Malaysia Ministry of Health for children. C) Book coloring contest among the Orang Asli children to develop their artistic skills. D) Interview session with the adults on their health condition related to vector-borne diseases. E, F) Food and goodies distribution to all Orang Asli participants.

# CONCLUSION

In summary, these community engagement programs are vital for the betterment of the Orang Asli communities in Malaysia. We believe these programs have equipped the communities with increased awareness of disease prevention as well as the importance of seeking immediate medical attention.



#### Posters and quiz paper used during the engagement



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