

## **Community practices and environmental reservoir as risk factor of Soil-Transmitted Helminths in Selected Rural Communities in the Philippines**

**Kim Louise Patagnan<sup>1</sup> Rico Ancog<sup>2</sup>, Vicente Belizario Jr.<sup>3</sup>, Billy Divina<sup>4</sup>,  
Martha Betson<sup>5</sup>, Vachel Gay Paller<sup>1</sup>**

<sup>1</sup>Parasitology Research Laboratory, Animal Biology Division, Institute of Biological Sciences, University of the Philippines Los Baños

<sup>2</sup>School of Environmental Science and Management, University of the Philippines Los Baños

<sup>3</sup>College of Public Health, University of the Philippines, Manila

<sup>4</sup>Department of Veterinary Paraclinical Sciences, College of Veterinary Medicine, University of the Philippines Los Baños

<sup>5</sup>School of Veterinary Medicine, University of Surrey, Guildford, Surrey, United Kingdom

Soil plays a significant role in the transmission of STH eggs. Soils from selected households in Caraga Region, Philippines were examined for parasite contamination. A total of 408 soil samples were processed through a modified sucrose flotation technique. Out of 408 samples, 92 (22.6%) were contaminated with parasite eggs, namely *Ascaris* sp. (14.7%), *Trichuris* sp. (2.7%), strongyle/hookworm (2.2%), *Toxocara* sp. (1.23%), *Capillaria* sp. (1.0%), and *Schistosoma* sp. (0.7%). Risk factors such as playing outdoors, working in the field, contact with an unclean water body, type of toilet facility, and how animals are kept showed significant associations with parasite soil contamination. QGIS maps were also generated to demonstrate the extent of soil environment contamination. The socio-economic status of local people had significant impacts on knowledge, attitude, and practices with regard to sanitation, hygiene, and health. The incidence of STH eggs contaminating the environment indicates human and animal activities associated with poor sanitation and hygiene practices, poor husbandry, and farming practices vis-à-vis poor socio-economic conditions. Thus, a coordinated effort involving various sectors in the government working together is needed to educate and build capacities among relevant sectors and stakeholders to control parasitic infections in marginalized communities in the Philippines.