

Journal of Tropical One Health – A platform for advancing One Health in the tropics

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The Journal of Tropical One Health (JTOH) serves as a multidisciplinary platform dedicated to the interconnectedness of human, animal, and environmental health in the tropical region. The tropical world continues to face intersecting health threats, including zoonotic and vector-borne diseases, antimicrobial resistance, and climate and environmental health threats. These challenges, compounded by gaps in surveillance, vaccines, therapeutics, and food security, highlight the critical need for One Health approaches that integrate human, animal, and environmental health systems. By publishing high-quality research, reviews, case reports, short communications, and perspectives, JTOH aims to bridge knowledge gaps and support informed decision-making for sustainable One Health solutions in the tropics. With this inaugural issue, we invite the global One Health community to contribute their expertise and innovations to advance integrated approaches that improve health, equity, and resilience across tropical ecosystems.

Keywords: zoonotic and vector-borne diseases, antimicrobial resistance, environmental health, climate change, food safety and security

Introduction

In recent decades, successive pandemics have reminded us that the next global health crisis often begins where humans, animals, and ecosystems converge. From outbreaks and epidemics of SARS and avian influenza to Ebola, Zika, Nipah, and the COVID-19 pandemic, each event has exposed vulnerabilities in our preparedness and the dangers of addressing health in isolation. The One Health approach provides a way forward by bringing together diverse disciplines to predict, prevent, respond and mitigate outbreaks, epidemics, and pandemics more effectively. Nowhere is this more urgent than in the tropical regions, where biodiversity, dense populations, and rapid urbanization create both vulnerability and opportunity for proactive One Health action.

As the first Editor-in-Chief, I am honoured to introduce this journal as a dedicated platform for advancing the One Health agenda, particularly within tropical settings where the convergence of humans, animals, and ecosystems creates both opportunities and challenges for disease control and health equity.

While several international journals address One Health broadly, including One Health, One Health Outlook, One Health Advances, and IJID One Health, there remains a critical need for a journal dedicated to the tropical One Health perspective. Tropical regions face distinct challenges, including high biodiversity, dense human and animal populations, environmental pressures, emerging infectious diseases, and interconnected issues such as food insecurity and livelihood vulnerabilities that require context-specific research, surveillance, and policy solutions. JTOH distinguishes itself by focusing specifically on these epidemiological, ecological, and socioeconomic realities, highlighting research that addresses not only emerging and neglected diseases but also the broader health, environmental, and societal challenges unique to tropical settings.

Tropical nations, many of which are low- and middle-income experience the greatest impact of infectious and neglected tropical diseases, zoonoses, and vector-borne illnesses. Furthermore, these regions face accelerating environmental changes, including deforestation, climate variability, and agricultural

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expansion, which heighten the risk of pathogen spillover. The One Health framework offers a powerful lens through which these complex problems can be studied and addressed collaboratively.

In Southeast Asia, for example, regional initiatives have strengthened surveillance and response to zoonotic diseases through multi-country collaboration. Yet, local capacities remain constrained by inadequate laboratory infrastructure and limited mechanisms for timely and transparent data sharing across human, animal, and environmental health sectors, which hampers early detection of outbreaks, slows coordinated responses, and reduces the effectiveness of regional surveillance networks.

Human-driven environmental changes such as expanding human population, urbanization, globalization, climate change, deforestation, and wildlife trade and consumption continue to disrupt ecosystems and contribute to the emergence of diseases (Spernovasilis et al., 2022). The rise of simian malaria, particularly *Plasmodium knowlesi* and *P. cynomolgi*, illustrates how such disturbances can alter vector and host interactions, enabling the spillover of pathogens from wildlife to humans. While these infections are endemic to forested regions of Southeast Asia, imported cases have now been reported in multiple countries among travellers visiting the region (Jeyaprakasam et al., 2020), highlighting their global relevance. These patterns underscore how local environmental changes can have far-reaching public health implications.

In addition to simian malaria, tick-borne diseases provide another important example of emerging health threats in tropical regions. Many of these pathogens, including *Rickettsia*, *Bartonella*, and *Borrelia* species, are endemic to Asia and display considerable diversity across different ecological zones (Yean et al., 2024). Their varied distribution and clinical presentations pose challenges for accurate diagnosis, as standard diagnostic tools may not detect all regional strains (Low et al., 2020). Moreover, effective treatment and management strategies often need to be tailored to the specific pathogens and local epidemiology. Given the increasing human–animal–environment interactions in the tropics, heightened surveillance, region-specific diagnostic approaches, and targeted therapeutic interventions are essential to mitigate the public health impact of these neglected but potentially serious infections.

Food insecurity remains a major One Health concern in many tropical regions. In parts of Africa and Western Asia, high food price inflation has made nutritious diets unaffordable for billions, disproportionately increasing child malnutrition (FAO et al., 2025). This worsening crisis, driven by climate change, conflict, and

economic instability, not only threatens human health directly but also increases the risk of infections among affected communities. For example, outbreaks of Avian influenza have caused the loss of hundreds of millions of poultry worldwide, often requiring large-scale culling to control transmission. Such outbreaks disrupt poultry production systems, increase the price of meat and eggs, and reduce the availability of affordable animal protein, particularly affecting vulnerable populations that rely heavily on poultry for nutrition and income (Xie et al., 2024; FAO, 2025;). These impacts highlight how animal disease outbreaks can directly affect food supply, livelihoods, and nutrition, demonstrating the interconnected nature of human, animal, and environmental health within the One Health framework.

Given the growing complexity and diversity of One Health challenges in tropical regions, JTOH publishes original research articles, reviews, short communications, and perspectives that address One Health issues within tropical regions. The journal welcomes contributions from diverse disciplines, including but not limited to:

i. Zoonotic, vector-borne, and emerging infectious diseases

- Epidemiology, surveillance, prevention, and control
- Outbreak, epidemic, and pandemic preparedness
- Vector biology and control

ii. Neglected tropical diseases and antimicrobial resistance (AMR)

- AMR in human, animal, and environmental contexts
- Stewardship and integrated mitigation strategies

iii. Animal health

- Livestock, companion animals, and wildlife in tropical ecosystems
- Disease monitoring, diagnostics, and interventions

iv. Vaccines, therapeutics, and diagnostics

- Development, evaluation, and implementation in tropical health contexts

v. Environmental and climate-linked health threats

- Impact of climate change, deforestation, land-use changes, and pollution on disease transmission

vi. Food safety, food security, and sustainable agriculture

- Impacts of climate change and infectious diseases on agricultural productivity and food systems

vii. Public health policy, governance, and One Health systems

- Cross-sectoral collaborations, interdisciplinary approaches, and health education
- Socioeconomic and cultural determinants influencing One Health implementation
- Community-based interventions and stakeholder engagement

Conclusion

In conclusion, the journal aims to serve as a leading platform for evidence and dialogue across human, animal, and environmental health in the tropics. We hope JTOH will inspire researchers, practitioners, and stakeholders to share their expertise, increase the visibility of tropical One Health research, and establish the journal as a recognized and influential voice in addressing emerging infectious diseases, zoonoses, antimicrobial resistance, and other critical health challenges. Looking ahead, JTOH seeks to influence policy, promote equity in research and

practice, and advance sustainable, integrated One Health solutions across tropical ecosystems.

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