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About APLMA-APMEN

Asia Pacific Leaders Malaria Alliance (APLMA) is an alliance of heads of government committed to achieving a region free from malaria by 2030. APLMA is a distinctive platform facilitating collective regional leadership for malaria elimination and health security.

Asia Pacific Malaria Elimination Network (APMEN) is a network of 22 countries and 54 partner institutions. APMEN facilitates regional and multi-sectoral collaboration around evidence-based practices and fosters innovation. Jointly, APMEN and APLMA act as an ‘evidence-to policy’ vehicle that links directly to leadership levels across the region.
**Introduction**

Infectious disease elimination necessitates active participation by enabling affected communities to become co-agents in preventive measures, diagnosis, treatment, and surveillance. Successful elimination strategies hinge on a deep understanding of local contexts and nuances best accessed through community engagement.

In the context of malaria elimination, communities play a crucial role in activities and decisions related to disease control and prevention – particularly in high-burden countries such as India, Indonesia, and Papua New Guinea (PNG). These countries harbour diverse environments that provide ample breeding grounds for mosquitoes as well as large diverse populations – including many tribal and rural communities – who face barriers in accessing healthcare. In such settings, malaria, a mosquito-borne infectious disease, remains a significant public health challenge despite substantial progress.

This policy brief presents a concise summary of evidence-based information and insights to aid stakeholders in understanding the pivotal role of community engagement in malaria elimination efforts in India, Indonesia, and Papua New Guinea. Additionally, it outlines the best practices that have proven to be effective and delves into the challenges encountered in community engagement, with the objective of informing decisions and actions that can further strengthen policy implementation and achieve tangible results in the battle against malaria across the Asia Pacific region.
Malaria situation

In 2021 there were 241 million malaria cases reported worldwide, of which 1.79 million cases were attributed to the Asia Pacific region. PNG bore the highest burden within this region – accounting for 36% of all cases. Pakistan (22%), Indonesia (17%) and India (9%) also contributed significantly to the malaria burden in Asia Pacific.

India reported 161,753 cases and 90 deaths, with 75% of all cases concentrated in tribal areas. Deemed the "heartlands of malaria," tribal areas make up 8% of India’s population but majority of the nation’s malaria cases. Indonesia, another diverse country with over 6,000 inhabited islands, reported 304,607 malaria cases. Comprising of a mainland and over 600 islands in Oceania, PNG has an annual parasitic incidence of 65.5 and accounted for 651,963 cases and 201 deaths.

Vulnerable populations

India: Vulnerable populations include tribal communities living in hilly and forested areas, particularly in states like Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, and the north-eastern states. These communities often lack easy access to healthcare services due to their remote locations.

Indonesia: Malaria prevalence is high in Eastern Indonesia, specifically in provinces like Papua and West Papua, where indigenous communities are at increased risk. These regions have a high vector density and hard-to-reach geographies which makes access to healthcare services difficult.

Papua New Guinea: Vulnerability to malaria is high among rural and remote communities with limited access to health services. Socioeconomic factors also contribute to the disease’s prevalence. Children under the age of five and pregnant women are especially at risk due to their lowered immunity.

Community engagement is essential for effective malaria elimination, aiding information dissemination and fostering preventive practices. It facilitates feedback to improve context-specific interventions, supports surveillance and outbreak response, and augments health infrastructure. Local volunteers can increase access to essential services, making community engagement a cornerstone of not only malaria elimination but also of overall health system strengthening.
Challenges in community engagement for malaria elimination

INCONSISTENT STAKEHOLDER ENGAGEMENT

Inconsistent engagement towards malaria elimination across varying levels of stakeholders was reported by experts in the 2022 Mid-Term Review in Indonesia. This led to a fragmented approach to community involvement, with engagement efforts lacking coordination and consistency across district, provincial, and national levels. Experts recommended developing a powerful advocacy initiative to ensure support from all stakeholders towards malaria elimination.¹

Lack of monitoring and evaluation systems have been reported in all three geographies which limits ability to track progress as well as help measure effectiveness of behaviour change communication and advocacy initiatives.⁵-⁷

CULTURAL AND SOCIO-ECONOMIC FACTORS

Gaps in socio-behavioural research with special emphasis on high-risk areas – such as Papua and West Papua in Indonesia¹ plus many tribal states in India² – as well as on special populations and groups. More than 90% of Indonesia’s national malaria burden is concentrated among the indigenous populations of Papua province and 75% of India’s burden is felt by tribal communities. Thus, it is imperative to deepen the
understanding of sociocultural dynamics that impact malaria prevention and control efforts in these regions.

Several cultural and socio-economic factors stem from diverse languages and customs within cultures. In PNG, traditional beliefs and misconceptions among communities often hinder malaria prevention and treatment efforts. Some mistakenly understand malaria to be caused by climate change and eating bad food, to be hereditary in origin, or to be a routine part of pregnancies. As accurate knowledge and awareness are pre-requisites to effective community engagement, these misunderstandings pose a threat to implementation.

Inadequate communication strategies for last-mile populations were reported during Indonesia’s mid-term review for advocacy and community engagement to support malaria prevention, treatment, and elimination efforts, particularly in high endemic areas of Papua and East Nusa Tenggara. Some information, education and communication (IEC) materials were available but had to be adapted for the local context. UNICEF has made available new materials that could be adapted for use in Papua and East Nusa Tenggara to target specific groups. However, to ensure effective delivery of these materials, it is critical to ensure that the managers of community health centres receive formal training in advocacy and the use of IEC materials.

### Shared challenges in engaging communities

**Inconsistent stakeholder engagement:** Across Indonesia, India, and Papua New Guinea, inconsistent engagement and scattered involvement at different levels (district, provincial, and national) pose challenges to comprehensive community engagement in malaria elimination efforts.

**Cultural and socio-economic factors:** Cultural beliefs, misconceptions about malaria, and socio-economic disparities often hinder malaria prevention and treatment efforts, necessitating deeper understanding of sociocultural dynamics and more targeted educational initiatives.

**Access and infrastructure issues:** Difficult access to rural and indigenous communities, compounded by inadequate health infrastructure and monitoring systems, significantly limit the effectiveness of malaria prevention, treatment, and elimination efforts.
ACCESS AND INFRASTRUCTURE ISSUES

Limited access to communities in PNG is a particular challenge, as 86% of the population resides in rural villages that are frequently difficult to reach. Nearly 25% of PNG’s health facilities are inaccessible by road or standard boat services. Similar challenges have been reported in key provinces and states of Indonesia and India, which are often hard-to-reach and host indigenous communities.

Absence of a dedicated community engagement strategy for malaria elimination has been highlighted by the recent Malaria Technical Review for PNG. The data suggested that only 25% to 60% of community schemes in the country include malaria case management and prevention modalities. Low prioritization of malaria in community-led initiatives poses a threat to achieving malaria elimination in countries like PNG which already face challenges related to accessibility, frequent migration, and fragile health infrastructure.

Key lessons from successful community engagement initiatives for vulnerable populations

Innovative community outreach and education: In India, the various uses of innovative community engagement strategies -- from spreading awareness through social media or on local buses to employing local community health workers for identification and prevention -- have shown how tailored, context-specific interventions and strong intersectoral collaboration can lead to successful community engagement and malaria elimination.

Recognition as a motivating factor: In Indonesia, the initiative of offering elimination certificates to districts has spurred healthy competition and fostered deeper community participation, emphasizing the role of incentives in promoting public health efforts.

Decentralized and collaborative partnerships: PNG’s decentralization of health services utilizing faith-based networks, employer-provided services, and public-private partnerships demonstrates the effectiveness of diverse collaborations and localised health care delivery through better community engagement.
Best practices in community engagement for malaria elimination

INDIA

Malaria-Mukt Bastar Abhiyan (Malaria-Free Bastar Campaign) in Chhattisgarh demonstrated effective intersectoral coordination and convergence. Various departments such as Women and Child Development, Education, Public Health Engineering Department, Panchayat and Rural Development Department, Forest, Tribal, and Fishery worked together, highlighting the importance of collaboration for community engagement and malaria elimination.

Intense and comprehensive community engagement and behaviour change communication campaigns in Karnataka entailed branding of local buses, hoardings, auto-rickshaws of malaria-endemic districts, and trains. Village-level engagement utilized folk media and print media IEC messaging in local newspapers. The Chief Minister advocated for protective measures against mosquitoes through personal and official social media channels (Facebook, Twitter, YouTube). Additionally, the Karnataka government ran a series of educational interviews on TV and radio, and supported inter-sectoral collaborations with other departments. One such collaboration was with the Water and Sanitation Department, which allowed for garbage vans to play malaria prevention messaging audio recordings during daily collection rounds.
In Odisha, over 47,000 Accredited Social Health Activists (ASHAs) identified and prevented malaria in villages through both the **Comprehensive Case Management Programme (CCMP)** and **Duragama Anchala Re Malaria Nirakaran (DAMaN)**. In 2013, ASHAs piloted several intensified surveillance and case management strategies. In 2016, with the launch of DAMaN, ASHAs detected and treated all malaria infections (with or without fever) and controlled vectors using long-lasting insecticidal nets (LLINs) and indoor residual spraying (IRS). Two to three DAMaN camps were held annually, which further promoted local community mobilization, information, education, and behaviour change communication. Malaria cases in Odisha dropped by 94% between 2016 and 2021.

The **Malaria Elimination Demonstration Project in Madhya Pradesh** tested various community engagement strategies using innovative IEC tools such as calendars, flip books, and posters used in tailored interventions for middle school activities, weekly community markets, and inter-personal communication. These techniques were developed ‘for the community, by the community’ through a public-private-partnership and received positive feedback and support from the community.

**INDONESIA**

**Recognition for sub-national elimination** through elimination certificates at the district-level was initiated by the national programme in collaboration with various stakeholders including private companies and civil society groups. This has resulted in a healthy competition between the states and deepened the community participation through civil society.

**Studies to understand treatment-seeking behaviours in communities** are ongoing in malaria-prone and high-risk populations. Training modules are used to enhance the interpersonal communication skills of staff. Communication methods are upgraded according to local community needs with focused design and clear messaging.

**Community volunteers conduct malaria testing and treatment in remote areas.** This innovative strategy included training of 700 volunteers by the District Health Offices to manage malaria cases in four districts of Sumba Island in 2022.
PAPUA NEW GUINEA

Decentralization of health services utilizing the faith-based network of churches provided approximately 50% of total medical services in PNG -- and up to 80% of services in some provinces. Other sources of health services include employer-provided health care, a small for-profit private medical sector, a few small health-focused non-governmental organizations, and a much larger traditional sector.

The Home-based Management of Malaria (HMM) programme focused on training and equipping community-based volunteers to provide malaria testing and treatment for uncomplicated malaria cases as well as appropriate referrals to health facilities. Since 2020, the HMM programme expanded to 12 provinces training over 1600 volunteers with support from the Global Fund. The HMM programme has helped reduce the number of daily outpatients and cases of severe malaria. Knowledge of malaria in local communities has also improved as people are now able to access service at their doorstep. Provincial health authorities also support this initiative by providing technical guidance, logistics and leadership support. The recent Malaria Technical Review has recommended further expansion of the HMM programme.

The PNG Industry Malaria Initiative (PIMI) was launched in 2013 as an innovative industry sector initiative to recruit PNG’s major resource sector companies to accelerate implementation of the National Malaria Control Strategy (NMCS). The core concept of PIMI was to assist major resource operators (in energy, mining and agribusiness) in forming public-private partnerships with host provinces to advance malaria control and ultimately achieve elimination by leveraging local networks and fostering community participation. Successful collaborations include the Lihir Group Malaria Elimination Project and funding from Ok Tedi in the Western Province.
Recommendations

**Strengthen monitoring and evaluation systems:** Implement robust monitoring systems to track progress and measure the effectiveness of community engagement strategies for malaria elimination. Along with the improvement of knowledge and awareness among communities, these systems must assess the active engagement of communities towards malaria elimination activities at various levels.

**Develop culturally-tailored engagement strategies:** Construct culturally-sensitive communication strategies that address local misconceptions about malaria, ensuring higher acceptance and adherence to preventive and treatment measures.

**Promote public-private partnerships:** Foster collaborations between public and private sectors to bolster community engagement in malaria prevention and treatment, utilizing private resources to enhance outreach in remote and underserved communities.
Conclusion

In conclusion, effective community engagement is pivotal to malaria elimination in India, Indonesia, and Papua New Guinea. Addressing challenges such as socio-cultural factors, geographic access, and lack of monitoring systems is crucial. Adoption of best practices, including public-private partnerships, intensive behavioural change communication campaigns and robust monitoring systems could accelerate progress. Policymakers and stakeholders are urged to prioritize and invest in community engagement strategies, recognizing their transformative potential for malaria elimination. These efforts should be coupled with continued investment in research, training, and infrastructure development. Only then can communities pave the way for a healthier and malaria-free future.
References


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