

Mosquito-borne disease & community engagement in high-income countries: Scoping review

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BACKGROUND & AIM

High-income countries in sub-tropical and tropical regions are at increasing risk of *Aedes* mosquito-borne diseases such as Dengue, Chikungunya and Zika. **Travel, trade, favourable environmental and social conditions can promote the establishment or spread of the *Aedes* mosquito in these regions.**¹

The *Aedes aegypti* mosquito predominately lives and breeds in and around people's homes. **Engaging the community is an important aspect of sustainable mosquito management practice.**^{1,2} Community engagement can entail a range of strategies from informing the community to empowering (Figure 2). Historically, government led strategies have dominated approaches to engaging communities, rather than co-production and empowering approaches where mosquito management strategies are planned, implemented and evaluated at a community level.²

- A scoping review was conducted between October 2018 and January 2019 with the aim of:
1. Describing the community engagement strategies used in mosquito-borne disease control within high income countries, and identifying any reported outcomes
 2. Characterizing the extent to which empowering approaches are incorporated as part of community engagement strategies

METHODS

This review was guided by the PRISMA-ScR checklist³:

Inclusion criteria:

- ❖ English language; full text; 2004 – 2018; World Bank classified High Income Country; Discussion of at least one community engagement intervention across the IAP2 Community Participation Spectrum⁴ - informing, consulting, involving collaborating, empowering (Figure 2); study related to mosquito borne disease prevention/control/management; all study designs included

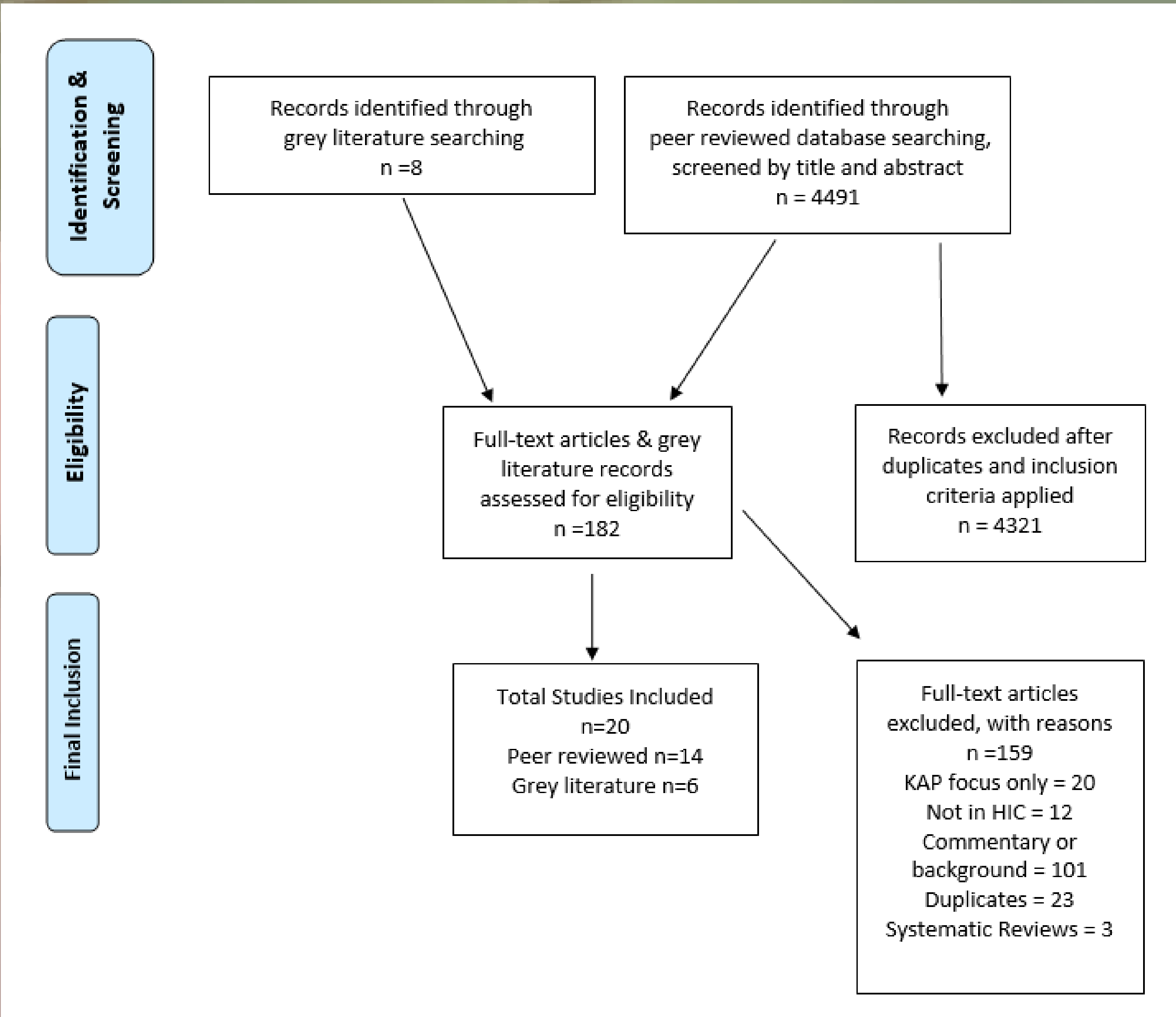


Figure 1. Methodology Flow Chart

RESULTS

- ❖ Twenty studies matched the review criteria: peer reviewed (n=14); grey literature (n=6)
- ❖ Studies were based in the United States (n=9); Spain, Italy & Germany (n=6); Queensland, Australia (n=2); Uruguay(n=1) & 2 global
- ❖ Studies were appraised using two frameworks -IAP2 Public Participation Spectrum⁴ and key Community Empowerment domains^{5,6}

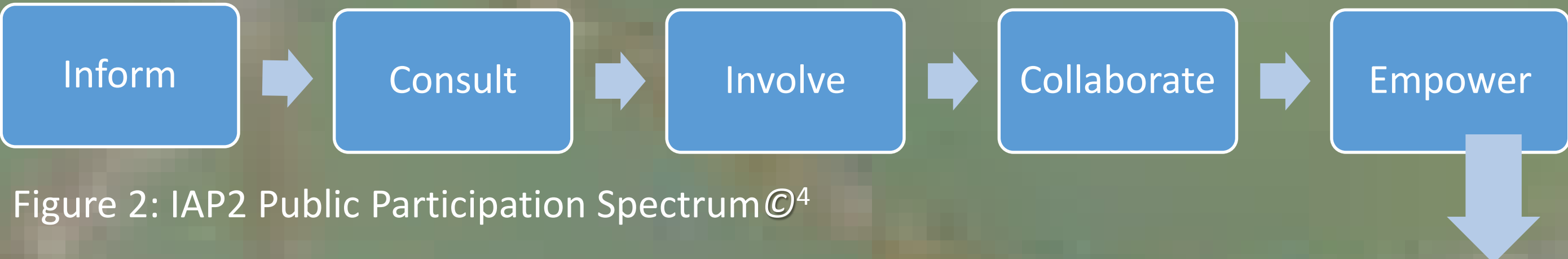


Figure 2: IAP2 Public Participation Spectrum⁴

- Community Empowerment Domains:**^{5,6}
- Individual and group participation
 - developing local leadership
 - resource mobilisation at a local level
 - assessment of problems
 - women's involvement
 - linking with others

KEY FINDINGS

- ❖ Most studies (n=12) were mapped to the IAP2 Public Participation Spectrum⁴ for 'consulting', 'involving' and 'collaborating' with the community; Evidence of effectiveness of these strategies was mixed
- ❖ 'Individual participation' was the most common Community Empowerment Domain described
- ❖ 3x studies involved the community in problem assessment & linked with other organizations such as schools
- ❖ 1x study described the value of women in decision making
- ❖ 1x study aimed at transferring 'power' to the community and demonstrated evidence of sustainable mosquito management

CONCLUSION & RECOMMENDATIONS

- Review suggests over reliance on government led approaches, rather than co-led or empowering approaches to engage communities in sustainable mosquito management practices
- Findings highlight a lack of empirical evidence to inform empowering approaches to mosquito management in high-income countries
- Rationale for using predominantly government led approaches not clear; further research is required to understand institutional barriers to employing empowering approaches in mosquito management in high-income countries

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