

COMMENT

The broad view of warfare ecology: response to Marler

Marler (2013) suggested replacing the established term 'warfare ecology' with the term 'military ecology'. We appreciate the desire for accuracy and inclusiveness in describing this emerging and important sub-discipline. Similar intent led us to choose the term 'warfare', which by definition involves the entire process of waging war (Collins 2011). Warfare ecology therefore encompasses a broad range of war-related activities and consequences during preparations for war (such as training, munitions development and testing), during war itself (for example battlefield effects and population displacement), and during the post-war period (for example reconstruction and recovery) (Machlis & Hanson 2008). Marler (2013) mistakenly interprets warfare as a synonym for war, a state of armed conflict, neglecting the term's much broader temporal and topical relevance. In suggesting 'military' as a replacement, Marler (2013) proposes a term limited to the activities of the armed forces (Collins 2011), an important but by no means comprehensive component of warfare.

By definition and necessity, warfare ecology reaches beyond the realm of the military to involve a much wider range of processes and stakeholders, including non-state parties and insurgencies, contractors, home front and war zone civilians, humanitarian and relief organizations (organizationally separate from military institutions), and reconstruction/restoration efforts. We are encouraged by the fact that practitioners have adopted this term in a diverse range of disciplines, including geography (Francis 2011; Hesse 2014), civil engineering (Stenuit & Agathos 2010), remote sensing (Gorsevski *et al.* 2012; Griffiths *et al.* 2012), conservation biology (Hanson *et al.* 2009; Jenni *et al.* 2012; Johnson *et al.* 2012), forestry (Boissiere *et al.* 2011), restoration ecology (Tidball & Krasny 2014), and public health (Leaning 2011). These examples include research that fits easily under the rubric of warfare ecology (such as post-conflict conservation planning), but that would be excluded if the field were limited to military studies.

Maintaining a broad definition keeps the focus on the shared goals of warfare ecology, namely understanding the complex relationships between warfare and ecosystems to reduce environmental harm, reduce human suffering, and promote peace and security.

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