



## Best of two worlds: Traditional ecological knowledge and Western science in ecosystem-based management

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Ecosystem-based management (EBM) is a rising paradigm in resource management. Social scientists agree that EBM necessitates a natural sciences foundation yet its human dimensions are less understood; a greater role for the social sciences is needed. One underutilized area is inquiry into how different cultural traditions order their universe to derive meaning and values from ecosystems in a manner directive for human behaviour. Providing insight into human perceptions of ecosystems and their components, social sciences contribute to understanding knowledge systems of Indigenous peoples and methods for relating Western and Indigenous management approaches. First Nations traditional ecological knowledge (TEK) and Western science represent potentially complementary traditions that can inform EBM. Although overlap exists, these traditions comprise distinct knowledge systems incorporating different methods and ways of knowing. An epistemological analysis of convergence and divergence between TEK and Western science is presented with attention to the social, philosophical, and methodological features of TEK systems. This framework is applied to the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound whose membership included Nuu-Chah-Nulth elders and forest scientists. Drawing equally on TEK and Western science, the Panel developed the groundbreaking silvicultural system of variable retention advancing EBM in Canada and spawning other initiatives. Ecosystems provided the shared conceptual terrain for bridging TEK and ecological science—the “best of two cultural worlds.” Special skills are required for such intercultural EBM with implications for ecosystem-based paradigms beyond this case. The boreal forest provides a worthwhile context for follow-up research.

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