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## A mixed-methods approach to develop a knowledge basket on the interrelationship between people and nature

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The HDN knowledge basket promotes the uptake of existing knowledge and expects to generate new knowledge on the interrelationship between humans and nature, focusing on the contribution of biodiversity to local livelihoods and wellbeing. In this paper we provide the background and develop a mixed-methods approach to data collection and analysis. This work emerges out of the need to develop methodologies with explicit commitment to a pragmatist worldview that capture the interplay between quantitative and qualitative approaches. By focusing on a pragmatist worldview, we address tensions between multiple knowledge systems that are often viewed as producing mutually incommensurable types of knowledge, as is the case of scientific and local knowledge. The interrelationship between humans and nature is complex, and the interactions people have with nature through appropriation, consumption, exchange and aesthetics intertwine material and symbolic values nested in local perception and culture. Understanding these relationships therefore requires not only use and integration of diverse methods but also being prepared to deal with the multiple knowledge systems and perspectives that cannot be captured under a single epistemology. The challenge of going beyond a reliance on scientific knowledge in conventional policy and decision-making motivated us to build a transdisciplinary strategy of inquiry capable of gathering, analyzing and integrating data from diverse of sources without compromising their meaning and validity. The HDN mixed-methods toolkit has four interdependent phases, which are situation analysis (Phase I), qualitative and quantitative data collection (Phases II and III), data integration, analysis, aimed to a stakeholder driven action planning, monitoring and feedback processes (Phase IV). Each phase includes a synthesis component that, according to the stage of the assessment, is designed to provide partial outcomes that include identification of available and required data, definition of protocols to gather and access data according to the ethics and institutions of the partner community with whom the assessment is being conducted, as well as the outcomes of participatory biodiversity and livelihoods assessments. This methodology is also sensitive to the interactions between power and knowledge at the community level in terms of gender, class, age and ethnicity. Our mixed-methods approach and toolkit provides a perspective for assessing human and nature relations that allows for the dialogue of multiple knowledge systems rooted in divergent ontologies. The new knowledge generated through HDN will provide transdisciplinary data to allow decision makers at all levels to incorporate the needs of biodiversity without undermining the wellbeing and livelihoods of the people who depend on it.