

Do ecosystem service maps and models meet stakeholders' needs? A preliminary survey across sub-Saharan Africa

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Abstract

To achieve sustainability goals, it is important to incorporate ecosystem service (ES) information into decision-making processes. However, little is known about the correspondence between the needs of ES information users and the data provided by the researcher community. We surveyed stakeholders within sub-Saharan Africa, determining their ES data requirements using a targeted sampling strategy. Of those respondents utilising ES information (>90%; n=60), 27% report having sufficient data; with the remainder requiring additional data – particularly at higher spatial resolutions and at multiple points in time. The majority of respondents focus on provisioning and regulating services, particularly food and fresh water supply (both 58%) and climate regulation (49%). Their focus is generally at national scales or below and in accordance with data availability. Among the stakeholders surveyed, we performed a follow-up assessment for a sub-sample of 17 technical experts. The technical experts are unanimous that ES models must be able to incorporate scenarios, and most agree that ES models should be at least 90% accurate. However, relatively coarse-resolution (1–10 km²) models are sufficient for many services. To maximise the impact of future research, dynamic, multi-scale datasets on ES must be delivered alongside capacity-building efforts.