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A Citizen Science Experiment: How well do park visitors identify wetland health?

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ABSTRACT

Citizen science refers to a discipline of scientific projects that utilize public participation and collaboration to complete or supplement a collected data set. Our study as a whole aims to assess the greenhouse gas (GHG) source-sink status of small, constructed wetlands in Kentucky through field and remotely sensed data. Additional facets of the project include evaluating the influence of the primary producer community on GHG uptake and emissions, and our ability to identify healthy small wetlands from science and community-based perspectives. Specifically, the citizen science aspect intends to assess both (1) gaps between knowledge of the general public regarding wetland health and that of experts in the field and (2) the validity of citizen science initiatives as a means of gathering data, particularly in the vein of ecological research. To address these objectives, we are distributing online surveys across the Olmstead Parks in Jefferson County via QR codes on posted signage asking participants to analyze the health of the wetland according to their opinion. We will then compare these responses, collected in the form of a Likert scale, to responses of experts in the field of wetland health when looking at the same wetland through photos submitted by the participants. The differences or similarities between these responses will provide insight into a random cohort of citizens' knowledge and perception of wetland health. Outcomes of this study can inform future environmental science curriculum in schools and best practices for education efforts from park managers to other environmental stewards.

KEYWORDS: wetland, citizen science, remote sensing, parks, survey