



Review

Improving Water Management Education across the Latin America and Caribbean Region

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Abstract: Education can help secure inclusive and resilient development around water resources. However, it is difficult to provide the latest science to those managing water resources (both now and in the future). Collectively, we hypothesize that dissemination and promotion of scientific knowledge using students as central agents to transfer theoretical knowledge into practice is an efficient way to address this difficulty. In this study, we test this hypothesis in the Latin America and Caribbean (LAC) region as a representative case study region. First, we use a literature review to map a potential gap in research on education around water resources across the LAC region. We then review potential best practices to address this gap and to better translate water resources education techniques into the LAC region. Integral to these efforts is adopting students as agents for information transfer to help bridge the gap between the global state-of-the science and local water resources management. Our results highlight the need to establish a new standard of higher educational promoting exchange between countries as local populations are vulnerable to future shifts in climate at global scales and changes in land usage at regional scales. The new standard should include peer-to-peer mentoring achieved by jointly exchanging and training students and practitioners in water management techniques, increasing access to water data and pedagogic information across the region, and lowering administration roadblocks that prevent student exchange.

Keywords: water; management; education; Latin America and Caribbean Region; Cuba; Ecuador

1. Introduction

Water is fundamental for the economy and quality of life in every country of the world. However, this renewable resource in some regions is increasingly threatened by human activities (e.g., pollution, overexploitation) [1,2]. Such threats are exacerbated by climate change and land use changes, i.e., agricultural frontier expansion and water used to feed growing populations and satisfy