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Comparative Survey of Integrated Watershed Management Potential in Several Continents: Preliminary Results

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Katherine Scott, a master's degree candidate in Clark University's graduate program in International Development, Community, and Environment (IDCE), spent two years in Tanzania with the US Peace Corps. As a volunteer she taught advanced level Geography at Iringa Girls Secondary School. In addition to teaching, she founded an environmental education club and arranged several field tours for the students, including climbing Mt. Kilimanjaro. She is pursuing studies in international development and environment, with a special focus in water resource management. Her undergraduate degree in Anthropology (Honors) and Geography from the University of Texas at Austin introduced her to interdisciplinary studies of human-environment interactions, and their potential value to global water resource management.

Timothy J. Downs, assistant professor of Environmental Science & Policy (D. Env.), is a specialist in environmental science and engineering, with a research focus on integrated capacity building for sustainable development. He applies multi-stakeholder, interdisciplinary approaches to multiple sectors: ecosystem/biodiversity conservation, water supply and sanitation, renewable energy, agriculture and clean production processes. The adaptation of appropriate environmental science/technology/policy tools to developing country contexts is a core strand of this work. He also seeks to understand historical perspectives on human-environment interaction, and its interdependence with cultural evolution. Downs has more than 15 years of technical experience designing and managing projects in the UK, the United States and Mexico.

ABSTRACT

Integrated Watershed Management (IWM)/Integrated Water Resources Management (IWRM) seeks to combine interests, priorities and disciplines as a multi-stakeholder planning and management process for natural resources within the watershed ecosystem, centered on water. Driven bottom-up by local needs and priorities, and top-down by regulatory responsibilities, it must be adaptive, evolving dynamically with changing conditions. IWM ideas and methods spearhead natural resource management processes that are more sustainable.

IWM/IWRM is new and still evolving: "IWRM has neither been unambiguously defined nor has the question of how it is to be implemented been fully addressed. What has to be

integrated and how is it best done? Can the broad principles of IWRM be operationalized in practice – and, if so, how?" United Nations Global Water Partnership, Technical Advisory Committee, 2001

Our team looked at existing water resource/watershed management practices in case study watersheds in North America, South America, Africa and Asia, comparing them against a Canadian Model of IWM/IWRM. This was done to explore the types of integration that are occurring, the successes and failures, and the potential for improving current practices. These preliminary comparative studies offer insights into common problems that require attention by scholar-practitioners we exemplify. The scope and need for cross-disciplinary approaches is impressive, well-supported by this work. The need to view IWM/IWRM within the broader context of integrated capacity building (ICB) is also discussed, thus providing an operational mechanism for more sustainable resource management strategies to evolve for developed, transitional and underdeveloped country contexts.