Jharna Joshi

Jharna Joshi completed her BArch from Tsinghua University, Beijing, MSc in Historic Preservation from University of Pennsylvania, Philadelphia, and Master's in Cultural Landscape from Jean Monnet University, Saint Etienne. She has worked on several architectural/heritage preservation projects in the Nepal, Hong Kong, USA, Vietnam and Greece. Her work experience in heritage conservation and management encompasses the entire spectrum from settlement planning to conservation of artifacts, from conservation of World Heritage Sites to privately owned properties, from drafting policies and strategies to detailed architectural documentation and preservation schemes, from initiating community interaction in a project planning to ensuring their involvement in the execution of a project.

Jharna has worked with a variety of agencies ranging from governmental departments, municipalities, consulting firms to international agencies and has also taught, researched, and written on heritage conservation and management. Currently, she is enrolled in the PhD in Tourism programme at Victoria University of Wellington.

Preserving the *Hiti*, Ancient Water Spout System of Nepal

Paper Abstract

Among the many forms of water architecture found in Nepal, the *hiti* is the most elaborate and intricate in design and technology. Known by many names, the common terms *hiti* or *dhara* is used in everyday life and includes the water spouts and the complex that usually has a few deities and a *pati* (open rest house) or two flanking the entrance.

The *hiti* is supported by *rajkulo* (irrigation canals), ponds, and wells that are part of the traditional water architecture group, along with the *ghats* (riverside cremation sites) and *jahdu* (drinking water tanks). The *hiti* and the *rajkulo* are the traditional water supply systems in the Kathmandu Valley that started in the Licchavi period (500 – 800 AD) and was further developed in the Malla period (1420 – 1768 AD). The *rajkulo* was built to irrigate the paddy fields in the villages and facilitate drinking water in the cities. The *hiti* is fed either by underground natural aquifers or the *rajkulo* with the earliest extant inscription found at Mangal *hiti*, which dates this structure to 570 AD.

Although numerous *hitis* have either dried up, been buried, or seasonally functioning, the working ones are still the only source of water for many, especially the urban poor. The unplanned urban expansion and construction of modern underground structures is damaging the *rajkulo* and affecting these ancient systems, especially with the loss of ponds that help in recharging the *hitis*. This paper will look into the complex system of this urban architectural fabric that makes the *hiti* system a unique and outstanding heritage. The paper will draw from the experience of the recently restored Nagbahal *Hiti* Rehabilitation Project (funded by the US Ambassador's Fund for Cultural Heritage and implemented through local user group) to study the issues of conserving these intricate architectural systems.