

Hydromimicry: Water as an Inspiration for Design

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The concept of *hydromimicry* is related to the better known one of *biomimicry*, which is the process of applying biological designs or processes to human solutions. By analogy, hydromimicry is based on emulating water's natural patterns, rhythms, and behaviors in the design of human products, technologies, and management strategies. Although the primary focus is the hydrosphere (e.g., oceans, rivers), there is some overlap with biomimicry where organisms evolve strategies that specifically exploit water's physical or chemical properties. In addition to observing and applying water's more perceptible attributes, hydromimicry recognizes its integral roles in spiritual traditions and cosmic processes. Natural systems, including those that use or are sculpted by water, typically are energy-efficient, produce minimal wastes, and achieve multiple goals simultaneously. As both a tool and creator of nature's designs, water's use as a model has applicability to topics as diverse as climate change, energy selection, food production, human health, ecosystem restoration, network design, chemical synthesis, resource management, infrastructure planning, and the fine arts. Applications range from those performed in people's backyards to those requiring sophisticated materials or instruments. In every case, the key is mimicking water or nature's use of water.