

International Symposium on Drylands Ecology and Human Security  
**(ISDEHS)**

**PROPOSED SESSION**

**Impact of Hydrological Changes on Ecological Conditions in Arid Zones**

Papers are sought on investigating hydrological changes in arid zones and the effect of these changes on ecological data such as river, land and atmosphere habitat. This causes infrastructure improvements, hazard reduction, and securing human life. Detection of human-based hydrological changes is also emphasized and investigating these changes on ecological condition is valuable. More mathematical and statistical modeling for eco-hydrological data is needed, particularly in arid areas. An increasing number of companies now act and communicate based on their triple performance (i.e. economic, ecological and social).

**Some examples:**

-Establishing disturbance gradients by a) identifying patterns in aquatic patterns in aquatic community data and b) examining the relations between these patterns and known stressors.

-Identify a set of important hydrologic parameters and describe relations with observed ecological patterns.

-Identify a comprehensive subset of ecologically significant variables (hydrologic, land use/cover composition and configuration, forest fragmentation, etc.) that account for the greatest amount of variability in the aquatic community data.

-Develop predictive aquatic community response models based on stressor patterns.

**Possible Subject Coverages:**

- Hydrology and Ecology Interactions
- Aquatic Hydrology
- Climate Changes and Wildlife
- Eco-hydrological Education

- Risk Analysis and Insurance
- Sustainable Development Modeling
- Case Studies
- Arid Zone River Ecology
- Human & Stream Ecology
- River Management Modeling
- Stream Physical, Chemical & Biological Treatment Processes
- River Statistics and Classification (parametric and nonparametric)
- Ecological Problems and Health Risk Assessment
- Hydrological Analysis of Low Flows

**Prof. S. Saied Eslamian**  
**School of Engineering and Applied Sciences,**  
**Princeton University,**  
**New Jersey 08544,**  
**USA**  
**(Email: [Eslamian@princeton.edu](mailto:Eslamian@princeton.edu), prof.eslamian@gmail.com)**