



PROGRAM IN WATER CONFLICT MANAGEMENT AND TRANSFORMATION

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## PROGRAM IN WATER CONFLICT MANAGEMENT AND TRANSFORMATION

**Oregon State University  
Institute for Water and Watersheds  
College of Earth, Ocean, and Atmospheric Sciences  
and  
The Universities Partnership for Transboundary Waters**

**Introduction** From the Klamath basin in the Pacific Northwest to the Jordan River in the arid and hostile Middle East, water conflicts are inherent and increasingly disruptive. Water which crosses boundaries – be they economic sectors, legal or political jurisdictions, cultural divides, or international borders – sets the stage for disputes between users trying to safeguard access to a vital resource, while protecting the natural environment. Without strategies to anticipate, address, and mediate between competing users, intractable water conflicts are likely to become more frequent, more intense, and more disruptive in the American West, the United States, and around the world.

**Rationale** To address water resource challenges and reduce conflict in Oregon, the U.S. and abroad, decision-makers and water professionals require specialized resources and skills that go beyond the traditional physical systems approach to water resources management. Current approaches to water resources education and research do not adequately address the subtle but inherent challenges to water resources management involved in dispute prevention and resolution.

**Project Summary** OSU's Program in Water Conflict Management and Transformation (PWCMT) is being designed to fill this niche as a broader, more integrative approach that explicitly integrates human and policy dimensions of water resources within the framework of technological approaches, and focuses training and research on all facets of water conflict transformation. The PWCMT serves as a training, resource and information hub for students, citizens, officials, and business leaders in Oregon, across the United States and internationally, facilitating dialogue on critical water issues across diverse values and perspectives through four integrated programs:

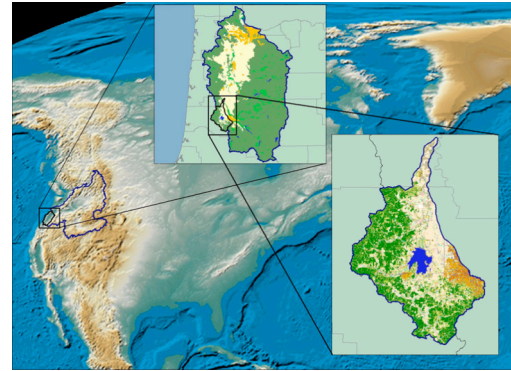
**1. The Certificate in Water Conflict Management and Transformation** invites instructors, graduate students, and professionals from across the state, the country and internationally to participate in case-based, interactive course and fieldwork in a multicultural and multidisciplinary learning environment. The program provides in-depth skills-building training to enhance personal and institutional capacity in water governance issues and strategies across distinct and overlapping contexts: dispute transformation, water & society, and economic, institutional, and ecosystems analysis.

**2. The Transboundary Freshwater Dispute Database** is a computer science/geography/public policy education and research lab developed around a state-of-the-art Geographic Information System of the world's international river basins and the major basins of the 17 western U.S. The database includes the largest compendium of international and national water events, compacts, and treaties available.

**3. The Universities Partnership for Transboundary Waters**, established in 2001 with OSU as its administrative hub, is an international consortium of water expertise representing institutes on five continents, which seeks to promote a global water governance culture that incorporates peaceful cooperation, environmental protection, and human security. Its programmatic areas include: Education & Training; Outreach & Information Resources; and Coordinated Applied Research. The Program helps fulfill OSU goals to build a prominent international role for OSU in water resource issues, and increases international student and faculty participation in OSU water resources education and research.

#### 4. Collaborative Facilitations and Training

Program affiliated faculty have designed and implemented a broad spectrum of applied activities in the Western U.S. and throughout the world, including: facilitations and mediations between stakeholders at both the transnational and international levels; skills-building workshops and training courses for graduate students and professionals from mid-career through the ministerial level; and collaborative learning processes in which stakeholders develop conflict management skills while enhancing dialog on current issues of dispute.



#### Research Projects

##### Western U.S. Focus:

###### *Western Water Basins at Risk*

This project utilizes historical records of water driven conflict and cooperation to identify key geographic indicators associated with both sides of the water relations spectrum.

###### *Basin Level Datasets for Anticipating Future Water Scarcity and Conflict in Oregon*

Data layers of Oregon's 18 administrative basins for the years 1990-2004 to assess future tensions, including hydrologic, demographic and hydropolitical data.

##### International Focus:

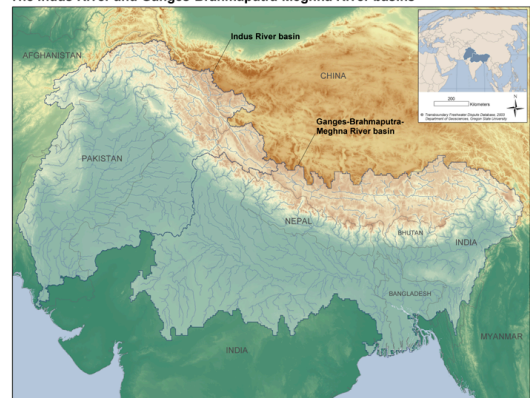
###### *Atlas of International Freshwater Agreements*

An historical overview of international river basin management, listing more than 400 international freshwater agreements, along with thematic maps related to the agreements, their content, and the river basins they represent.

###### *Basins at Risk*

A project that identifies indicators of geopolitical water resources conflict and specific international basins at risk for future tensions, and monitors the likelihood of domestic and international disputes. Studies of "hydropolitical vulnerability" for each continent are forthcoming.

The Indus River and Ganges-Brahmaputra-Meghna River basins



#### Tabular and Spatial Database

##### *Case Studies: Water Conflict Resolution*

Negotiating notes and background material on 14 case-studies of water conflict resolution.

##### *International Freshwater Treaties Database*

A searchable database of summaries and/or the full text of more than 400 international, freshwater-related agreements, covering the years 1820 to 2007.

##### *International River Basins Register*

This register lists the world's international river basins, delineated by continent. Includes basin name, total area of basin (sq. km), list of countries associated with basin, area of each country within basin (sq. km) and percent area of each country within basin.

##### *U.S. Interstate Freshwater Compacts Database*

A searchable compilation of 39 U.S. interstate compacts.

##### *International Water Event Database*

A searchable database documenting historical international water relations from 1948 to 2008.

##### *Water Conflict and Cooperation Bibliography*

A searchable database of publications concerning water conflict and cooperation.

##### *Hydropolitical Vulnerability Indicator Variables*

Biophysical, socioeconomic, and geopolitical data at the basin and/or country scale.

#### Contact

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