# Water is Life

Module 1 - i2P H2O Tour



"Water thou hast no taste, no color, no odor; canst not be defined, art relished while ever mysterious. Not necessary to life, but rather life itself. Thou fillest us with a gratification that exceeds the delight of the senses."

- Antoine De Saint-Exupery (1900-1944), Wind, Sand, and Stars, 1939

#### INTRODUCTION TO THE H2O TOUR

#### Welcome to the i2P H2O Tour!

From January to May of 2010, impossible2Possible will be focusing on the world of water. Water is said to be, and truly is life. It is the nectar, the fuel that sustains and powers all living things. A simple molecule of profound complexity and versatility that influences our every action and the essence of our being. It is worshipped, and traded, bought and sold, soiled and mined, taken for granted by some and cherished by others. It is forever cleansing and replenishes itself, and is offered free from the sky. Yet the present and future of water resources on the planet are troubled.

The United Nations estimates that there are currently 1.1 billion people that live without adequate water resources (<u>United Nations Human Development Report</u>). 3.6 million people die each year from water-related illness; 43% of these water-related deaths are due to diarrhea and 98% of water-related deaths occur in the developing world. It is estimated that half of the world's hospital beds are occupied by patients with water-related illnesses. Hardest hit by water-born illness are children; every 15 seconds, a child dies from a water-related disease. 84% of water-related deaths are in children under the age of 14.

As troubling as these statistics are, the situation is only expected to worsen. According to researchers cited in the journal Nature (see: <u>Nature</u>) this number will steadily increase such that by the year 2050 75% of the world's population will be experiencing water scarcity. Recognizing the growing world water crisis, the United Nations declared an International Decade for Action 'Water for Life' 2005 - 2015 (see: <u>Water for Life</u>).

Now at the half-way mark of the Decade for Action, there have been some gains in the access to clean water and effective sanitation in the developing world. Yet other factors now threaten to hasten water scarcity, principal among them the effects wrought by climate change. Great swaths of the world are now facing physical water scarcity including the American South-West, Australia, China, India, the Middle East and North Africa.

#### Russia - Tunisia

To highlight the subject of water i2P will travel to two extreme environments and juxtapose the profound differences they demonstrate with respect to water resources and management. In March 2010 an i2P team will visit Lake Baikal in Russia, the world's most voluminous lake which contains roughly 20% of the world fresh surface water. This will be followed in April by a trek across the Tunisian



Sahara, a section of the world's largest hot desert. For the Sahara Desert leg of expedition i2P will be selecting five youth delegates between the ages of 17 and 21 to join the expedition.

As the expeditions unfold, a free interactive web based education resource will be made available through the i2P website. A set curriculum that addresses a broad spectrum of water related issues will be mirrored and highlighted by the daily progress of the expedition. The curriculum will tell the story of water from its molecular basis, life giving properties, and cyclic motion to its relevance in religion, business and existence in space. The state of the world's water resources will be described with special attention being given to the effects of pollution, overpopulation, industrialization and climate change.

Through the website students in classrooms from registered schools will have an opportunity to ask expedition members questions over live video feeds from the field. Interactive question and answer functionality will further enable students to participate in the expedition.

Central to the education resource will be the following components:



## **EDUCATION MODULES**

A series of eighteen education modules (including the introduction) form the backbone of the education resource. The modules will address the following subject matter:

- 1.Introduction to the i2P H2O education resource.
- 2. What are the life giving properties of water?

- 3. How is water used by the human body?
- 4. What is the water cycle?
- 5. Groundwater?
- 6. What are the fresh water resources of the world?
- Salt water.
- 8. Frozen water.
- 9. Why are so many people going thirsty in the world?
- 10. How is fresh water found?
- 11. Why are groundwater reserves vanishing?
- 12. A reflection on water in religion
- 13. Water Pollution
- 14. Heavy water
- 15. Is there water elsewhere in the universe?
- 16. Water and the advent of war
- 17. The economics of water
- 18. Water and climate change.

Education modules can be read during the course of the expedition, used as an adjunct to set class curriculum, or serve as a stimulus for future class discussions.

#### INTERACTIVE QUESTION AND ANSWER PROGRAM

During the expedition anyone can send in written questions to the expedition team simply by pressing on the Q&A tab on the i2P expedition home page. These questions will be answered and posted as audio or written responses on the website.

# INFORMATION BOXES EMBEDDED IN THE MODULES

There are video and photo links embedded in the modules. These links appear in orange boxes.

# SCHOOL EXERCISES

There are education exercises posted in modules related to the topic, aimed at stimulating further thought on the topic at hand. These appear in the red boxes.



## **FACTS OF SPECIAL INTEREST**

Every module has features of special interest related to the topic at hand. These are found in the blue 'Did You Know' boxes.



# **NETWORK FORUM**

On the i2P website there is an interactive forum that will allow teachers and students to interact and exchange information online. This function is internal to the i2P website and is based on Facebook functionality. This will permit an exchange of ideas and observations on the part of those following the expedition.

So please join us for this remarkable journey to explore the world of water!

