



**Prince Sultan Bin Abdulaziz  
International Prize for Water**

**PSIPW**

**6th Award (2014)**





**HRH Prince Sultan Bin Abdulaziz  
(1930 - 2011)**



“Political unrest and economic degradation are the consequences when water, nutrition, energy, and the environment are threatened. When these four essentials of human life are in danger, so is the nation. Scientists and researchers have an important role to play in developing innovative and effective solutions to ward off the threat of hunger and thirst in the Arab world and beyond.”

“It is going to take effective management, international commitment, and political strength to avert the impending crisis of water scarcity. Even this will not be enough without the committed efforts of scientists and researchers to provide the innovative solutions and technology that we need. They must be given every encouragement.”

**- HRH Prince Khaled Bin Sultan, PSIPW Chairman**

# PSIPW

## Recognizing Innovation



# 5th Award Winners



Dr. Ashok Gadgil



Dr. Kevin Trenberth



Dr. Charles Franklin Hooley



Dr. Mohamed Khayat Souhaim



Dr. Damia Barcelo

# Creativity Prize



Dr. Ashok Gadgil

**The team of Dr. Ashok Gadgil, Dr. Susan Addy, Case van Genuchten (University of California Berkley, USA ), Dr. Robert Kosteki (Lawrence Berkeley National Laboratory) and Dr. Joyashree Roy (Jadavpur University, Kolkata).**

The prize is awarded to this team of researchers for developing an innovative and effective method of treating the arsenic contamination of groundwater using electrocoagulation.

# Surface Water Prize



Dr. Kevin Trenberth

**The team of Dr. Kevin Trenberth and Dr. Aiguo Dai (National Center for Atmospheric Research, USA).**

The prize is awarded to this team for groundbreaking work that provides a powerful estimate of the effects of climate change on the global hydrological cycle, with a clear explanation of the global water budget.

Dr. Trenberth and his team have investigated climate variability and trends in the past, and then reconstructed river discharge into the world's oceans for almost 1000 river basins.

They then used climate models to understand likely changes in the future and the level of uncertainty associated with those predictions.

They have given us a much clearer understanding of hydrologic responses to climate change, which will in turn provide guidance for future planning.



The image is a screenshot of a PBS NewsHour video player. At the top left is the PBS logo, a stylized head profile with a brain inside a circle. To its right is the text "PBS NEWSHOUR" in a bold, sans-serif font, with "PBS" in black and "NEWSHOUR" in red. Below the logo and title is a navigation bar with four tabs: "Topics" (highlighted in red), "Video", "Recent Programs", and "Teacher Resources". The main content area has a black background. At the top of this area, it says "ANALYSIS AIR DATE: July 2, 2012". Below that is the title "What's Causing Unusually Hot Temperatures in U.S.?" in white text. The video frame shows a man with grey hair and glasses, wearing a white polo shirt, standing in front of a wooden bookshelf filled with books. A red banner at the bottom of the video frame contains the text "DENVER Kevin Trenberth NATIONAL CENTER FOR ATMOSPHERIC RESEARCH". At the very bottom of the screenshot is the video player's control bar, which includes a play/pause button, a volume icon, a progress bar showing "0:25 / 6:01", a settings gear icon, a clock icon, the YouTube logo, and a full-screen icon.

# Groundwater Prize



Dr. Charles Franklin Harvey

**The team of Dr. Charles Franklin Harvey (Massachusetts Institute of Technology, USA) and Dr. Abu Borhan Mohammad Badruzzaman (Bangladesh University of Engineering and Technology, Dhaka).**

The prize is awarded to this team for developing a complete diagnostic and conceptual model for understanding and preventing the arsenic contamination of groundwater.

# Alternative Water Resources Prize



Dr. Mohamed Khayet Souhaimi

**Dr. Mohamed Khayet Souhaimi (University Complutense of Madrid, Spain).**

The prize is awarded to Dr. Khayet for his work in pioneering and promoting membrane distillation for water recovery using alternative renewable energy sources.

# Water Management & Protection Prize



Dr. Damià Barceló

**Dr. Damià Barceló (Catalan Institute for Water Research, Spain).**

The prize is awarded to Dr. Barceló for work at the leading edge of water science in understanding the effect of pharmaceuticals in the water environment, developing new methods for future risk assessment and management of emerging contaminants, and the investigation of water quality in intensively-used basins.



**Prince Sultan Bin Abdulaziz  
International Prize for Water**

**6th Award (2014) Nominations**

# Introduction

PSIPW is offering a suite of five prizes, covering the entire water research landscape.



# The Prizes – Description & Value



[1] The Creativity Prize – This prize is awarded to an innovator or pioneer for work that can rightly be considered a breakthrough in any water-related field.



[2] The Surface Water Prize – covering every aspect of the study and development of surface water resources.



[3] The Groundwater Prize – covering every aspect of the study and development of groundwater resources.

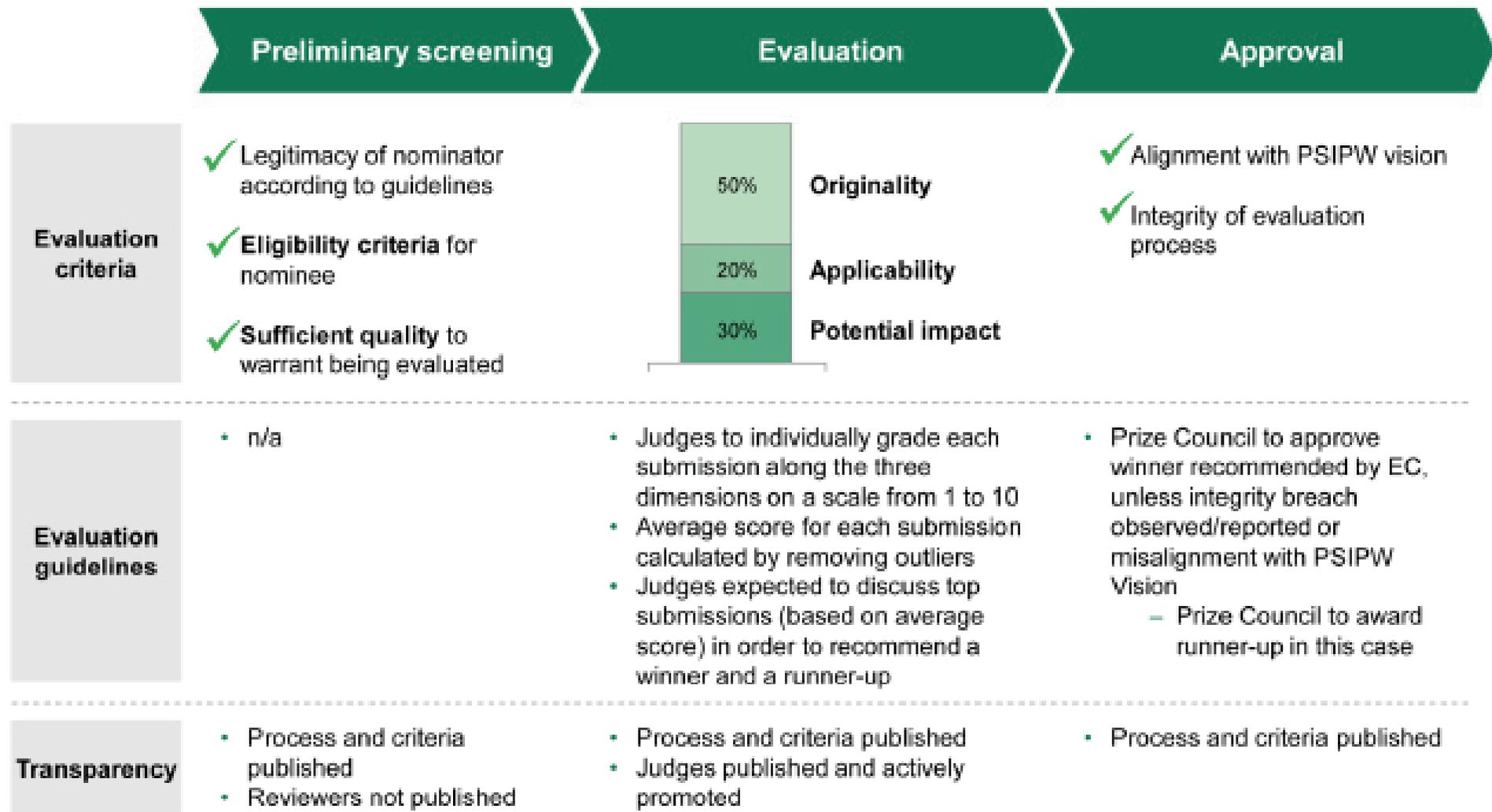


[4] The Alternative Water Resources Prize – covering desalination, wastewater treatment, and other non-traditional sources of water.



[5] The Water Management & Protection Prize – covering the use, management, and protection of water resources.

# Evaluation Criteria



# Nominations Are Open

Nominations for all five of our Prizes are now open for our 6th Award. We cordially invite scientists, researchers, inventors, and organizations having innovative water-related published research or registered patents within the past five years to apply.

Nominations are made online at our PSIPW website. All works and documentation can be uploaded as part of the application process.



The deadline for submitting applications and all nominated works is 31 December 2013.

[www.psipw.org](http://www.psipw.org)

# 6th Award Prize Calendar

1 February 2012: Call for nominations to the Prize and opening of online application form for the current award

31 December 2013: Deadline for receiving nominations

February-September 2014: The evaluation process

October 2014: The Prize Council announces the winners of the 5th Award

December 2014: The Awards ceremony for the 6th Award

UN / Morocco / PSIPW

# 3rd International Conference on the Use of Space Technology for Water Management

Rabat - October 2013

Hosted by:  
The Royal Centre for Remote Sensing (CRTS)  
Morocco





<http://water-portal.com>  
[info@water-portal.com](mailto:info@water-portal.com)

# INTERNATIONAL WATER PORTAL

**A joint effort of the United Nations & the  
Prince Sultan Bin Abdulaziz International Prize for Water**

The International Water Portal is a comprehensive online forum for all parties professionally involved with water. Its unique design combines the functionality of a professional database, an online digital library, and a professional networking site.





# 5th International Conference on Water Resources and Arid Environments

Held concurrently with  
the Awards Ceremony of the  
**Prince Sultan bin Abdulaziz  
International Prize for Water  
5th Award 2010 - 2012**

**Riyadh - Kingdom of Saudi Arabia  
6 - 8 January 2013**



# ICWRAE 5

72 papers were presented by scientists from 16 countries. There was a session dedicated to the use of GIS and Remote Sensing for environmental applications. The following are some of the conference's recommendations:

- 1- Rainwater and runoff storage and harvesting efforts are important tools to reduce soil salinity as well as increase cultivated areas on wadi banks.
- 2- There is a problem in the region with low-elevation areas and wadis being used as dumping grounds for sewage and industrial solid and liquid wastes.
- 3- Local and regional monitoring systems are needed to assess the impact of climate change on rainfall and desertification, and to design cost-effective hydraulic structures.
- 4- Harnessing renewable energy for desalination will both minimise its environmental impact and reduce costs so it can become a viable alternative to traditional water resources.
- 5- The region needs to develop regulations and protocols for managing common international basins.

# Other Activities

1. The Prize supports the research programs of the Prince Sultan Institute for Environmental, Water and Desert Research at King Saud University, particularly those that relate to water issues, particularly the Environmental Space Atlas of Saudi Arabia, with which the Prize's experts are directly involved.
2. The Prince Sultan Bin Abdulaziz International Prize's Chair for Water Research at King Saud University, which is supervised by an international panel of distinguished scholars, supports graduate students of various nationalities in a program of research into rain and floodwater harvesting, and particularly the impact that climate change has on these efforts.
3. The Prize supports and participates in a number of international conferences around the world, including the upcoming 35th International Symposium on Remote Sensing and the Environment being held in Beijing.

# For More Information

Please visit the Prize website: [www.psipw.org](http://www.psipw.org)

For inquiries, you may contact the General Secretariat of the Prize at the following address:

**Prince Sultan Bin Abdulaziz International Prize for Water**

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**Water is life**