The background of the slide is a painting of a river scene. In the foreground, a dark, rocky outcrop or bridge structure is visible on the right side. The river flows from the foreground towards the background. In the distance, there are several buildings, including a prominent one with a tall, dark tower or minaret. The sky is a warm, hazy orange and yellow, suggesting a sunset or sunrise. The overall style is impressionistic with soft, blended colors.

# Global Water Initiatives: What Do the Experts Think?

Report on a Survey of  
Leading Figures in the 'World of Water'

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*Presented at the*

**Workshop on Impacts of Mega-Conferences on  
Global Water Development and Management  
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# Why Study Global Water Initiatives?

- *What are they?* GWIs are institutions that aim to advance knowledge base regarding the world's inland water and its management. Since 1980s, missions often include active social and policy component.
- *Origins?* Numerous & divergent disciplinary, ideological, sectoral, institutional. sources
- *Utility?* Innovative, useful, practical observations & recomms., obscured by # of voices, variety of approaches
- *Status?* Mosaic of initiatives phenomenon poorly understood & unstudied
- *Research Questions?*
  - ~ Well-defined network with clear links, traceable influences, unified purpose? Or independent, poorly-connected, competing?
  - ~ Have initiatives made a difference?

# Purpose of Paper & Hypothesis

- **Purpose:** To report on the survey.
- **How:** Via written materials and use of two survey instruments, In the process, the validity of the hypothesis will be assessed.
- **Working hypothesis:** The numerous existing global water initiatives frequently have duplicative aims and have overproliferated.
- **Expectation:** Experts in the field would tend to minimize salutary influences of GWIs and advocate their consolidation or selective elimination.





# Roots of Water Consciousness and its Internationalization

- **1945 . . . WW II ends . . . Multinatl. ways to avoid wars**
  - ~ Reduce conflict by improving human conditions
  - ~ UN agencies for health, nutrition, educ./sci., human rights, . . .
- **1950-60s . . . UN prompts 1st global resources initiatives**
  - ~ Intl. Geophysical Year, 1957-58
  - ~ Arid Zone Programme, from 1950
  - ~ Intl. Hydrological Decade, 1965-74
  - ~ Man & the Biosphere Programme, 1971-present
- **1945-late 1970s . . . Ambitious, large-scale waterworks**
  - ~ Dams, irrigation, drainage; hydro plants; interbasin transfers
  - ~ Signals of 20th C progress, centrality of water to society

# Evolution of Organized Efforts: Professional Societies

- Increased intl. signif. of water ⌚ birth of numerous institutions to advocate one or another of its aspects
- Prof. societies long in vanguard of this advocacy
- For professionals of various stripes to share intellectual spaces & expertise, and promote basic & applied research

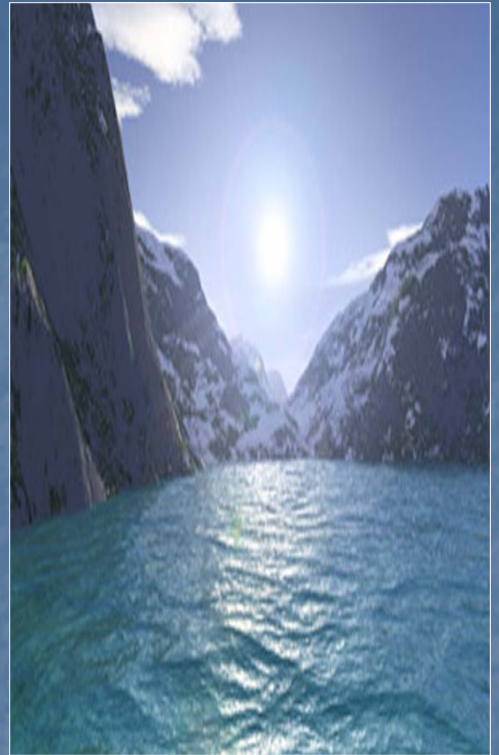


# Evolution of Organized Efforts: Professional Societies

Intl. Navigation Assoc. (PIANC) . . . . .	1885
Commission Internationale des Glaciers . . . . .	1894
Intl. Union of Geodesy and Geophysics (IUGG) . . . . .	1919
Intl. Assoc. of Hydrological Sciences (IAHS) . . . . .	1922
Intl. Assoc. of Theoretical and Applied Limnology (SIL) . . . . .	1922
Intl. Council for Science (ICSU) . . . . .	1931
Intl. Assoc. for Hydraulic Research (IAHR) . . . . .	1935
World Irrigation and Drainage Congresses . . . . .	1951
Intl. Assoc. of Hydrogeologists (IAH) . . . . .	1964
Intl. Water Resources Assoc. (IWRA) . . . . .	1973
Intl. Water Assoc. (IWA) . . . . .	1995
Intl. Water History Assoc. (IWHA) . . . . .	2001



# Evolution of Organized Efforts: International Hydrological Decade & Its Origins



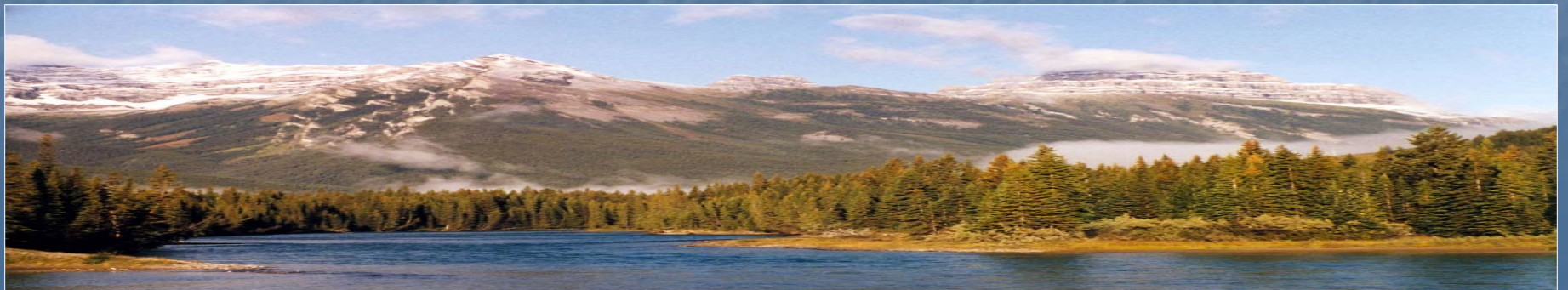
- **Effects of Postwar Polarization**  
Isolation of professionals from counterparts  
Ideological differences in science & tech.  
Gulf in content of science
- **Responses: Call for global programs**  
Intl. Geophysical Year (IGY), 1957-1958  
**Intl. Hydrological Decade (IHD), 1965-74**

## **IHD Objectives**

- Collect hydrological data
- Research problems
- Assess resources & budget balances
- Facilitate info. exchange
- Educate & train

# Evolution of Organized Efforts: International Hydrological Programme (IHP)

- Last action of IHD: large scientific conf. in Paris in 1974
- *Question:* how to harness IHD energy, carry forward unfulfilled ambitions
- IHD seen as 1st part of long-term program
- UNESCO's 1974 Gen. Conf. took lead in transforming IHD into periodically renewable **International Hydrological Programme (IHP)**



# The International Hydrological Programme (IHP)

- Goal similar to IHD: strengthen connections between science research, applic., & educ. on water
- From 30 member states & 19 observer nations to 164 natl. committees
- Redefined every 6 yrs., admin. by UNESCO
- Phased approach to permit adaptation & redefinition
- Since 1981 emphasizes **practical, rational** mgt. of water resources; since 1990 **"sustainability"** central
- Sees itself as permanent forum to encourage multinational coop. & innovation in water sci. & mgt.



# Types of Institutions and Processes

Next slides describe following types of initiatives

- Designated periods
- Organized events
- Intergovernmental & nongovernmental organizations

# Types of Institutions & Processes: Designated Periods



<u>Designated Period</u>	<u>Years</u>
Intl. Hydrological Decade (IHD)	1965-74
Intl. Drinking Water Supply & Sanit. Decade (DWSSD)	1981-90
Intl. Year of Freshwater (IYF)	2003
Intl. Water for Life Decade	2005-15

# Types of Institutions and Processes: Organized Events

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- **Types** Forums, conferences, megaconferences
- **Topics** All-inclusive environ. themes vs. water only
- **Size** Last 2 World Water Forums, 5,000, 10,000+
- **Participants** More interdisciplinary, more NGOs
- **Agendas** Problem-framing principles: sustainability, biodiversity, IWRM, bottom-up, equity
- **Results**
  - ~ Well-intentioned declarations
  - ~ But idealistic, largely unimplemented
  - ~ Most common outcome: "networking"

# Types of Institutions & Processes: Events & Declarations



<u>Organized Event: Declaration</u>	<u>Year</u>	<u>Venue</u>
UN Conf. on Human Envir.: <b>Stockholm Declaration</b>	1972	Stockholm
UN Conf. on Water: <b>MDP Action Plan</b>	1977	Mar del Plata
Intl. Conf. on Water & Envir.: <b>Dublin Statement</b>	1992	Dublin
UN Conf. on Envir. & Devel.: <b>Agenda 21</b>	1992	Rio
First World Water Forum: <b>Marrakech Declaration</b>	1997	Marrakech
Intl. Conf. on Water & Sust. Devel.: <b>Paris Declaration</b>	1998	Paris
2nd World Water Forum: <b>World Water Vision</b>	2000	The Hague
UN Millennium Assembly: <b>Millennium Declaration</b>	2000	New York
Intl. Conference on Freshwater: <b>Minist. Declaration</b>	2001	Bonn
World Summit on Sust. Devel.: <b>Jo'burg Plan of Impl.</b>	2002	Johannesburg
Third World Water Forum: <b>Kyoto Minist. Declaration</b>	2003	Kyoto

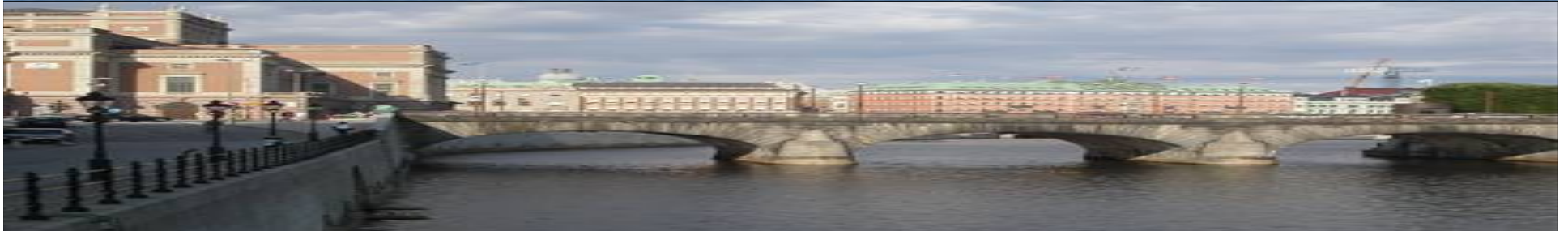
# Types of Institutions & Processes: Independent, Multilateral Initiatives

- **AIDA** (Intl. Association for Water Law)
- **AWRA** (Amer. Water Resources Assoc.)
- **CWS** (IGU Comm. on Water Sustain.)
- **DWC/CPWC** (Dialogue/Co-operative Prog. on Water & Climate)
- **DWFE** (Dialogue on Water, Food & Envir.)
- **GEWEX** (Global Energy & Water Cycle Exp.)
- **GIWA** (Global Intl. Waters Assess.)
- **GWP** (Global Water Partnership)
- **GWSP** (Global Water System Project)
- **HELP** (Hydrol. for Environ., Life & Policy)
- **IAH** (Intl. Assoc. of Hydrogeologists)
- **IAHR** (formerly Intl. Assoc. for Hydraulic Research)
- **IAHS** (Intl. Assoc. for Hydrol. Sci.)
- **ICID** (Intl. Comm. on Irrig. & Drain.)
- **ICOLD** (Intl. Comm. on Large Dams)
- **ICSU** (Intl. Council for Science)
- **IHDP** (Intl. Human Dimensions Prog. on Global Envir. Change)
- **IHP** (Intl. Hydrological Programme)
- **INPIM** (Intl. Netw. on Particip. Irrig. Mgt.)
- **IPCC** (Intergov. Panel on Climate Chg.)
- **IUCN** (World Conservation Union)
- **IUGG** (Intl. Union of Geodesy and Geophysics)
- **IWA** (Intl. Water Association)
- **IWALC** (Intl. Water Assoc. Liaison Committee)
- **IWMI** (Intl. Water Mgt. Institute)
- **IWRA** (Intl. Water Resources Assoc.)
- **MDGs** (Millennium Development Goals)
- **PCCP** (From Potential Conflict to Co-operation Potential)
- **PIANC** (Intl. Navigation Association)
- **Ramsar** (Ramsar Conv. on Wetlands)
- **UN Eco. Commission for Europe**
- **WCWTC** (World Comm. on Water for 21<sup>st</sup> C)
- **WHO** (World Health Org.)
- **WMO** (World Meteorological Org.)
- **WWAP** (World Water Assessment Prog.)
- **WWC** (World Water Council)
- **WSSCC** (Water Supply & Sanit. Collab. Council)

# Survey Methodology

## Respondent Types

	Identified	Completed at least 1 survey	Response rate (%)
Representatives	54	34	63
Observers	62	37	60
Males	90	64	71
Females	26	7	27



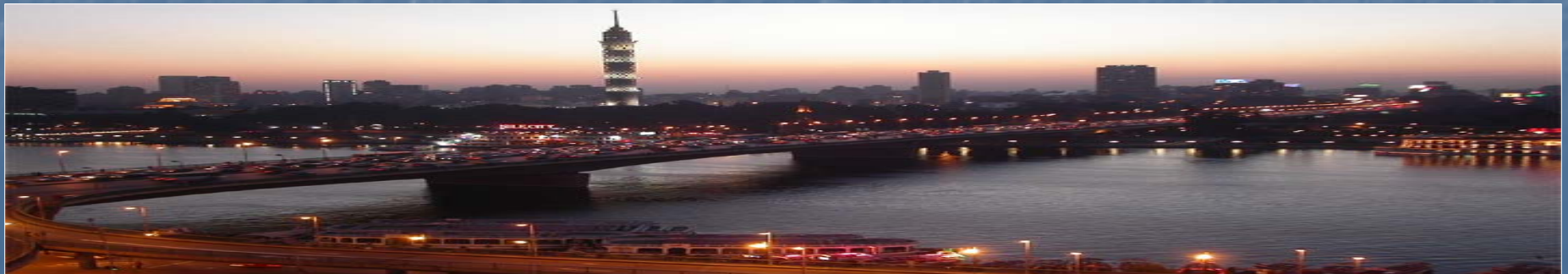
# Survey Methodology

## Response Summary

Action	No. of individuals	% of initial survey pool	% of those agreeing to participate
<b>Contacted</b>	<b>116</b>	<b>100</b>	
Declined to participate	9	8	
No response	27	23	
<b>Agreed to participate</b>	<b>80</b>	<b>68</b>	<b>100</b>
Completed 1 or both forms	71	61	89
Long form & interview	53	46	66
Short form	56	48	70

# Professional Societies

Program	Year estab.	Influence rating (1 to 5; with 1 = best)
Intl. Assoc. of Hydrological Sciences (IAHS)	1922	2.30
Intl. Assoc. of Hydrogeologists (IAH)	1956	3.04
Intl. Water Association (IWA)	1999	3.08
Intl. Water Resources Association (IWRA)	1972	3.15
IAHR (Intl. Assoc. of Hydraulic Research)	1935	3.22
Intl. Water Assocs. Liaison Comm. (IWALC)	2000	3.79
<b>All professional societies</b>		<b>3.10</b>



# Designated Periods

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<b>Program</b>	<b>Influence rating (1 to 5)</b>
<b>International Hydrological Decade (IHD)</b>	<b>2.69</b>
<b>Intl. Year of Freshwater (IYF)</b>	<b>3.12</b>
<b>Intl. Drink. Water Supply &amp; Sanitation Decade</b>	<b>3.40</b>
<b>All time periods</b>	<b>3.07</b>

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# Organized Events

Program	Year estab.	Influence (1 to 5)	
Intl. Conf. on Water & Envir. (ICWE)	Dublin	1992	2.17
UN Conf. on Envir. & Devel.	Rio	1992	2.39
Second World Water Forum (SWWF)	The Hague	2000	2.50
Millennium Assembly	NY	2000	2.53
Third World Water Forum (TWWF)	Kyoto	2003	2.56
UN Conference on Water (UNCW)	Mar Del Plata	1977	2.86
Intl. Conference on Freshwater (ICF)	Bonn	2001	3.13
UN Conf. on Human Envir.	Stockholm	1972	3.16
First World Water Forum (FWWF)	Marrakech	1997	3.37
Intl. Conf. on Water & Sust. Devel.	Paris	1998	3.73
<b>All events</b>			<b>2.84</b>



# Intergovernmental & Nongovernmental Organizations

Program	Year estab.	Influence (1 to 5)
UNESCO's Intl. Hydrological Prog. (IHP)	1975	2.38
World Water Council (WWC)	1996	2.80
World Water Assessment Prog. (WWAP)	2000	2.90
Global Water Partnership (GWP)	1996	3.02
Hydrology for Envir., Life & Policy (HELP)	1999	3.08
Water Supply & Sanit. Collab. Council (WSSCC)	1990	3.40
GEWEX (Global Energy & Water Cycle Exp.)	1988	3.43
Dialogue on Food, Water & Envir. (DWFE)	2001	3.48
Global Water Syst. Project (GWSP)	2001	3.62
Global Intl. Waters Assessment (GIWA)	1999	3.88
<b>All organizations</b>		<b>3.20</b>



# Observations and Interpretation

## Influence

### Comparative Observations

- Composite mean score for all 29 GWIs = **3.02** or "C" (2.84 to 3.19). Respondents did not rate influence of initiatives highly.
- Further evidence of cynicism: Only 11 of 29 ⚡ "C"; highest was "B-" (2.0-2.5), for only 5 GWIs; while 4 were assigned "D+" rating (3.5-4.0).
- Among four categories (societies, time periods, events, organizations), **events considered most influential** (2.84) and **organizations least influential** (3.19).



# Observations and Interpretation Influence

## Professional Societies

- IAHS considered most influential (2.30)
- IAH, groundwater hydrology organization, was second (3.04)
- IWA, estab. 1999, next at 3.08
- IWALC, very recent, lowest-rated at 3.79



# Observations and Interpretation Influence

## Designated Time Periods

- IHD by far the highest-rated at 2.69; can be seen as inspiration for subsequent time periods
- At other end, Intl. Drinking Water Supply & Sanitation Decade rated at 3.40, not very influential



# Observations and Interpretation

## Influence

### Organized Events

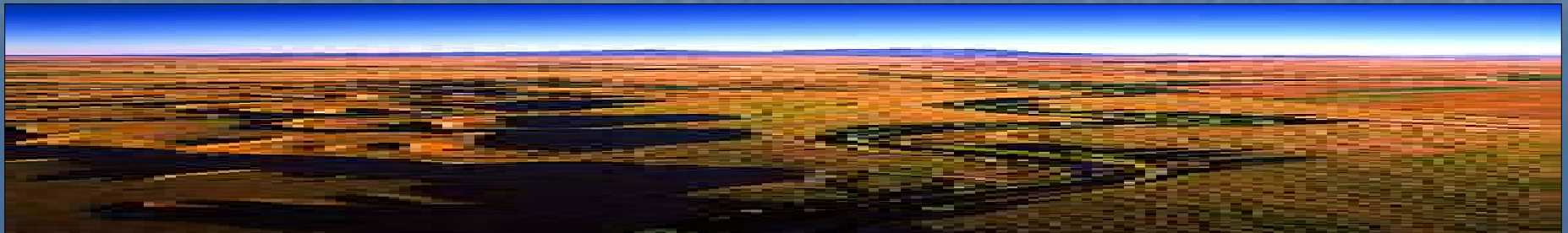


- Dublin Conference most highly regarded (2.17); highest score for any GWI.
- Rio Earth Summit, though less focused, next at 2.39
- World Water Forums II (2.50), then III (2.56). WWFI not well known (3.37)
- Mar Del Plata first to be dedicated to water, its principles widely accepted, but received average ranking (6<sup>th</sup> of 10) with 2.86
- 1998 Paris conference ranked last (3.73)

# Observations and Interpretation Influence

## Organizations

- Of 10 rated, IHP scored highest with 2.38
- 2 of next 3 highest were WWC (2.80) and GWP (3.02). Cooperation or competition?
- WWAP (2.90) and HELP (3.08), both at UNESCO, also “friendly rivals,” scored similarly
- Lowest-scoring initiative was GIWA



# Observations and Interpretation

## Views and Opinions



### Role of Governments, NGOs, Stakeholders

- Overwhelming support for govt. involvement (96%)
- NGOs (88%), stakeholder groups (93%) also valued
- Leadership is greatest contribution of govts. (34%)
- No expectation of funding from NGOs, stakeholder groups
- NGOs (27%), stakeholder groups (59%) enhance participation

# Observations and Interpretation

## Views and Opinions

### Significant Actions

- Advancing ideas & practices (49%)
- Publications most significant (11/36), projects & programs next (10/36)
- Only 4% of respondents cited conferences & workshops as significant

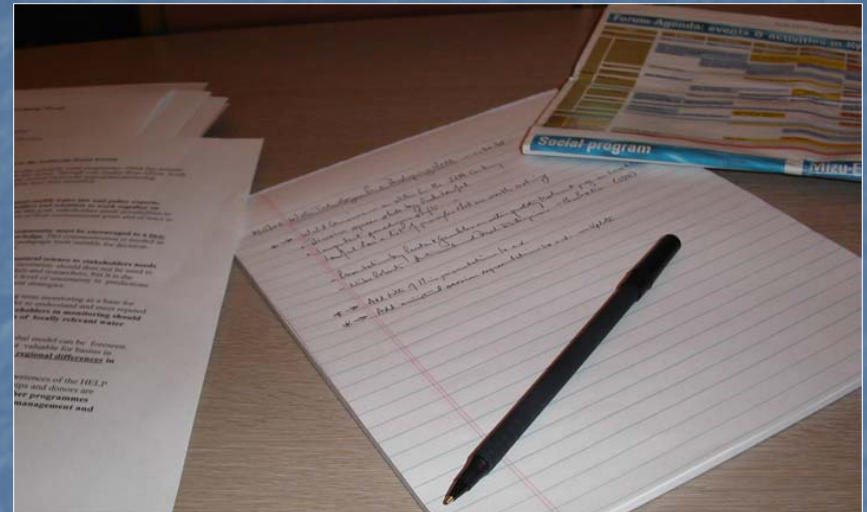


# Observations and Interpretation

## Views and Opinions

### Program Results

- Again, meetings & conferences regarded (just 3 of 77)
- Ideas & practices favored by publications
- Trends parallel those for “actions”
- One difference: only 3% thought developing policies was feasible action, but 10% thought policies had actually resulted
- Indecision (25 of 77) likely a proxy for skepticism
- Just 1 respondent saw real difference on the ground



# Observations and Interpretation

## Views and Opinions

### Institutional Overlap

Three times as many sought to explain impact (52) as tried to define causes (18)

- Of those who rated impact, 58% considered it negative
- 75% thought overlap was prevalent, by implication, *too* prevalent
- Half of raters thought impact was significant
- 28% contended that new initiatives were created for “personal” reasons



# Observations and Interpretation

## Views and Opinions



### Proliferation

- Attitudes toward proliferation even more negative (64%) than toward overlap (58%)
- 56% thought it significant
- 9 of 10 who cited intensified competition as effect, called that a drawback
- Only 2 of 6 possible effects considered beneficial

# Observations and Interpretation

## Views and Opinions



### Managing Diversity and Proliferation

- In spite of views that overlap, proliferation negative, a startling contradiction: 82% chose guiding proliferation instead of stopping or limiting it
- In other words, maybe too many GWIs, but their proliferation should not be limited
- Flexible management seen as most appropriate option
- To paraphrase Malin Falkenmark, just as with species, institutional diversity provides richness & variety of approaches, opinions, individuals

# Observations and Interpretation

## Views and Opinions

### Assessing Overall Impact

- 79% said GWIs had positive or partially positive influence
- 20% pointed to “real” changes as most significant
- 20% found that GWIs have exerted influence in “fuzzy” ways such as increasing awareness
- Similarly, strong support (6/7) for success in improving communication, cooperation, and facilitation (7/8)



# Conclusions

- GWIS are of four types
- Survey 1 allows assessment of relative influence
- Survey 2 allows testing of hypothesis

First part (too many GWIs with duplicative aims) is confirmed

Second part (reduce # of GWIs) rejected;  
instead, strong acceptance of existence,  
embrace of diversity, interest in helping manage



# What Does it All Mean?



- Largest remaining task: Assess actual accomplishments in “world of water”
  - ~ Institut. processes vs. changes caused by demography, development, globalization, . . .
  - ~ Are improvements in conditions due to specific initiatives?
  - ~ Can real changes in policy be attributed to initiatives?

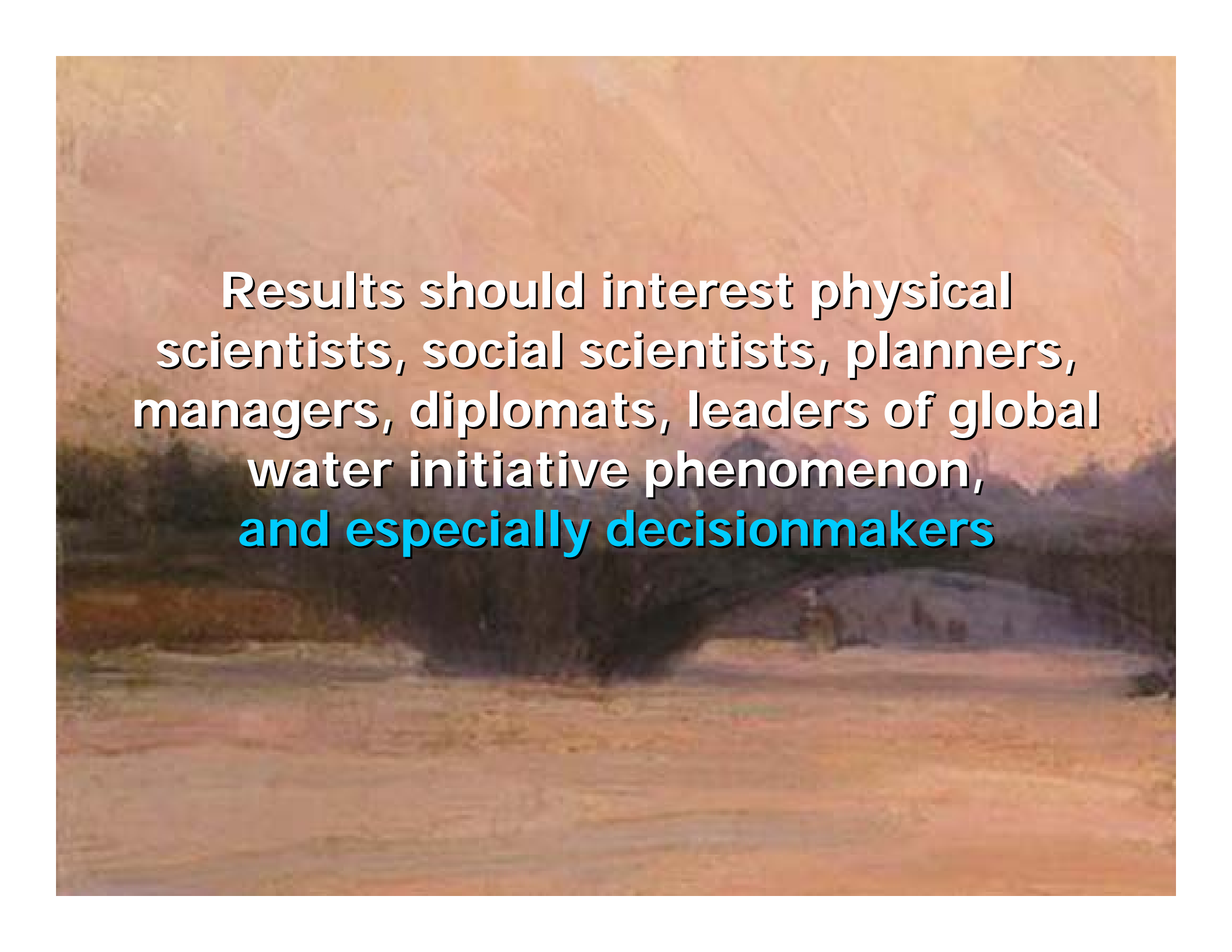
# To Be Done. . . .

**Develop instruments to measure progress**

**Gauge effectiveness of activities on the ground**

**Identify programs that have/have not achieved aims**

**Determine ingredients of success and failure**



**Results should interest physical  
scientists, social scientists, planners,  
managers, diplomats, leaders of global  
water initiative phenomenon,  
and especially decisionmakers**