

A painting of a coastal scene. In the foreground, a dark boat is on the water. In the background, a lighthouse stands on a rocky outcrop. The sky is a mix of warm and cool tones, suggesting a sunset or sunrise. The overall style is impressionistic.

Global Water Initiatives Their Evolution and Significance

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Why Study Global Water Initiatives?



- *What are they?* Since early 1950s, concerted, org. activity to enhance understanding, access to world's water resources
- *Origins?* Numerous & divergent disciplinary, ideological, sectoral, instit. 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 enterprises?
 - ~ Have initiatives made a difference?



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 led to 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 betw. 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**
- **Independent, multinational initiatives**
- **Some conclusions**



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



- **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 and Processes: Events & Declarations



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

- **2 questionnaires**

- 1 detailed, structured, open-ended
- 1 quantitative, checkbox-type

- **Initiatives surveyed 45**

Initiatives that agreed 28 (75.7%)

- **Informants queried 116**

Agreed to participate 79 (68.1%)

Have responded 51 (64.6%)



Selected Independent, Multinational Water Initiatives

Program	Year estab.	Influence rating (1 to 5; with 1 =best) N = 41
World Water Council (WWC)	1996	2.85
Global Water Partnership (GWP)	1996	2.97
Global Intl. Waters Assessment (GIWA)	1999	3.86
Hydrology for Envir., Life & Policy (HELP)	1999	3.26
World Water Assessment Prog. (WWAP)	2000	3.09
Dialogue on Food, Water & Envir. (DWFE)	2001	3.54
Global Water Syst. Project (GWSP)	2001	3.67



Survey Findings on Initiatives

- Cynicism: little impact, but do not be eliminate
- Too many: rarely add to previous ones
- New ones complicate work of existing ones
- Despite duplication, competition, inefficient resource use, no one suggests consolidation.
M. Falkenmark: *"institutional biodiversity"*
- Two camps:
 - ~ Water a *commodity* for improving human conditions
 - ~ Let civil society decide how to value & use water
- Same approach for other sectors (health, energy, etc.)



What Does it All Mean?



- Largest remaining task: Assess actual accomps. 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 progs. 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,** who “need to . . . reflect on the past before they can address contemporary challenges”

(M. Reuss 2000)