HELP in the Pacific

HELP Pacific SYMPOSIUM 2005

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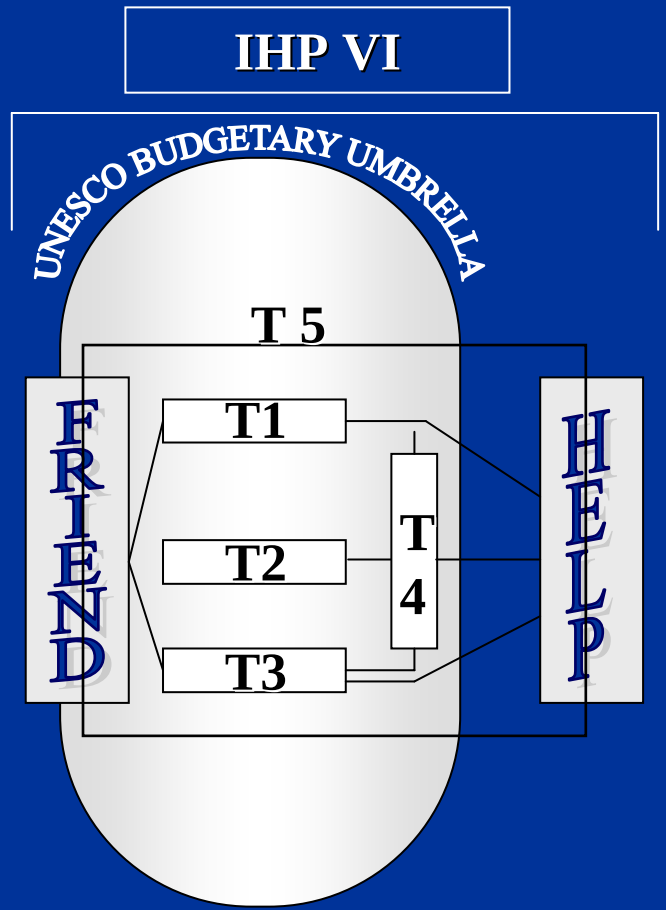
Hydrology for the Environment, Life and Policy

http://www.unesco.org/water/ihp/help

To deliver social, economic and environmental benefit to stakeholders through sustainable and appropriate use of water by directing hydrological science towards improved integrated catchment management basins

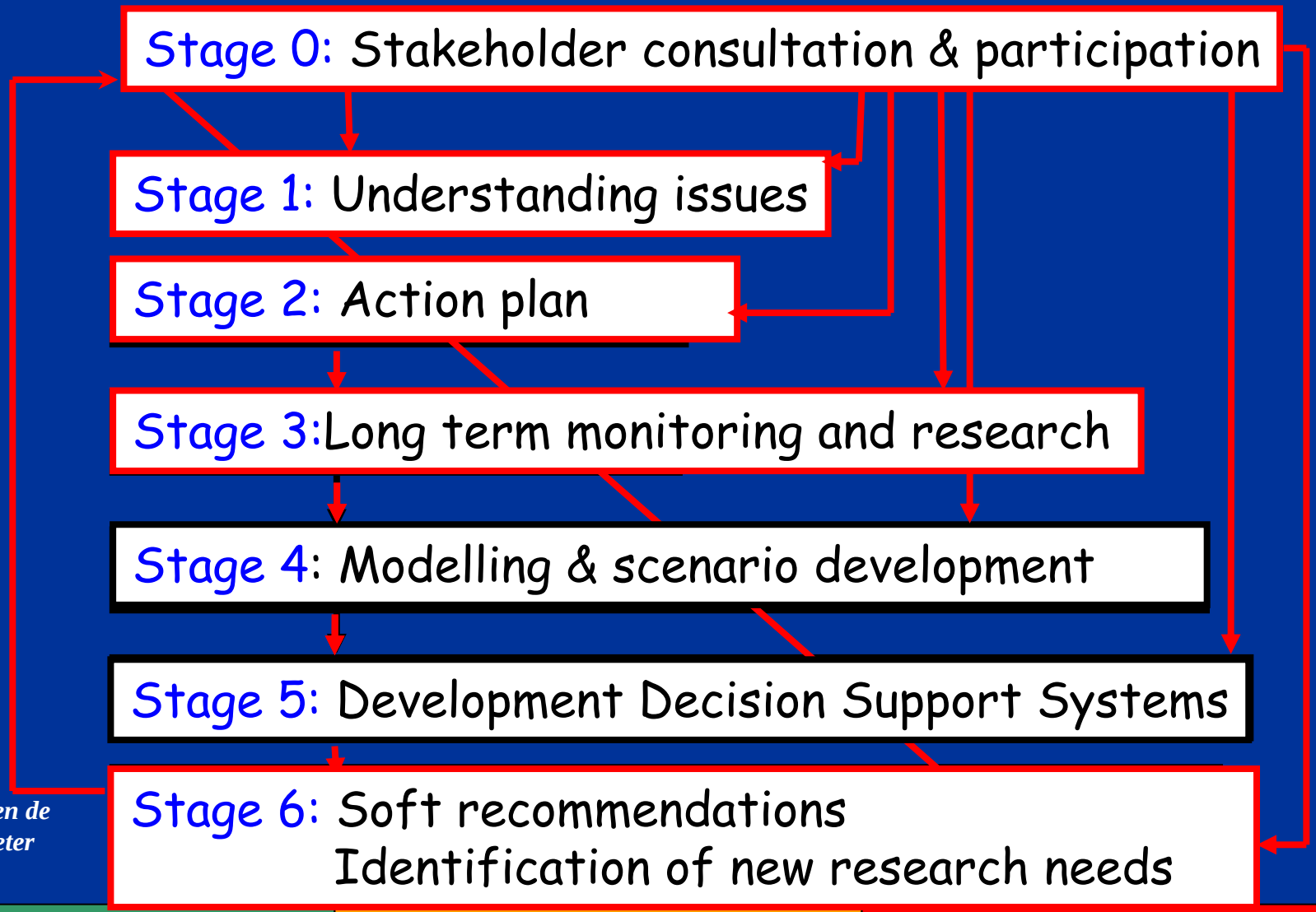
Real people	Real catchments	Real answers



HELP is an integral cross cutting activity of the UNESCO International Hydrological Programme

Theme 1 (T1)	*Global Changes and Water Resources*
Theme 2 (T2)	*Integrated Watershed and Aquifer Dynamics*
Theme 3 (T3)	*Land Habitat Hydrology*
Theme 4 (T4)	*Water and Society*
Theme 5 (T5)	*Water Education and Training*

Breaking the vicious cycle in integrated project management



From Carmen de Jong with Peter Herbertson

HELP

1-8 June 1994,

Honiara,

Solomon Islands

Proceedings of UNESCO/SOPAC/UNDDSMS Workshop

Pacific Water Sector Planning, Research and Training

SOPAC
South Pacific Applied Geoscience Commission

UNESCO
United Nations Educational, Scientific and Cultural Organization

International Hydrological Programme

UN/DDSMS

Project 1 **<u>Catchment study on a high volcanic island to:</u>**

- Collect baseline water balance data for watershed management
- Evaluate impacts of different land use practices (e.g. deforestation and mining) on water quality and quantity;
- Preferred Location: Solomon Islands;
- Alternative Location: Western Samoa

Project 2 **<u>Water management study of a freshwater lens on a low lying coral island to:</u>**

- Collect baseline water balance data
- Quantify the interception and evapotranspiration components;
- Assess groundwater recharge from water balance and groundwater table movement data
- Preferred Location: Kiribati;
- Alternative Location: Tuvalu

Project 3 **Groundwater pollution transport study to:**

- Investigate the linkage between water supply and sanitation/waste disposal sites;
- Develop guidelines for use by islands and aid donors for appropriate sitting and spacing between water supply and sanitation/waste disposal sites;
- Preferred Location: Tonga;
- Alternative Location: Niue

Project 4 **<u>Community level studies to establish and update baseline information on:</u>**

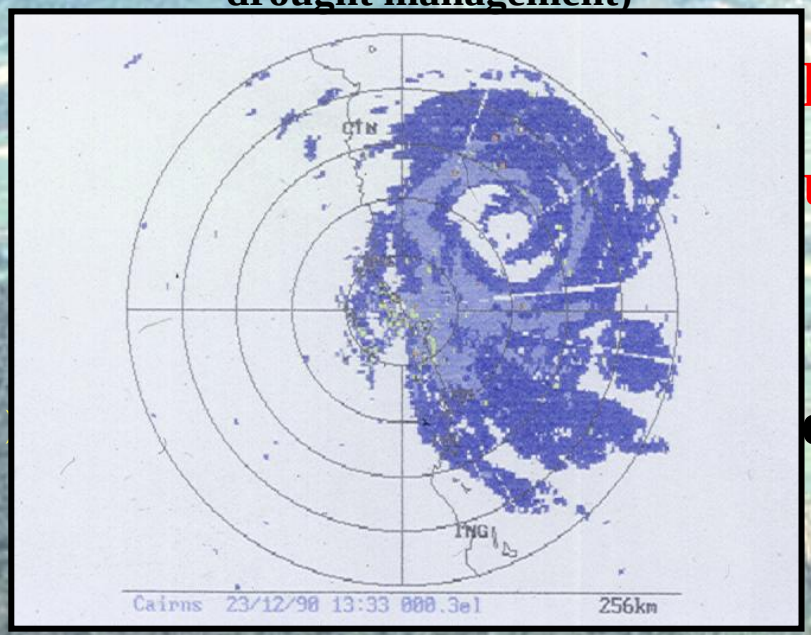
- Knowledge and attitudes of families on safe water and adequate sanitation;
- Assessment of family water utilization and sanitation practices;
- Impact on families from community water and sanitation systems;
- Preferred Location: Communities in the study locations for projects 1,2 and 3;

Policy Issues

- Impacts of climate variability and change on water resources *
- Water use in providing food for a growing population.

*Note: includes water-related disaster prevention and mitigation (flood control and drought management)

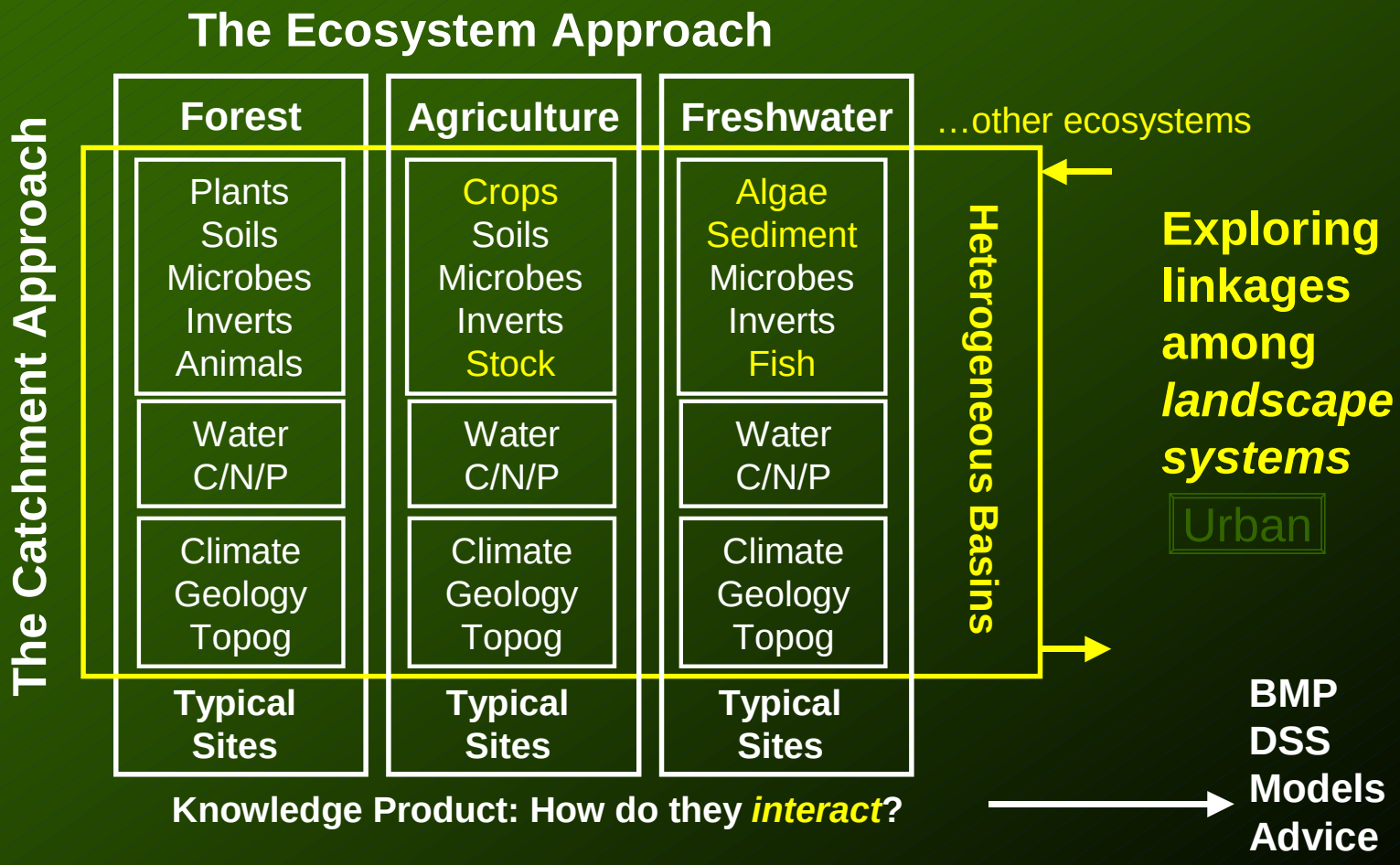
potential conflicts.



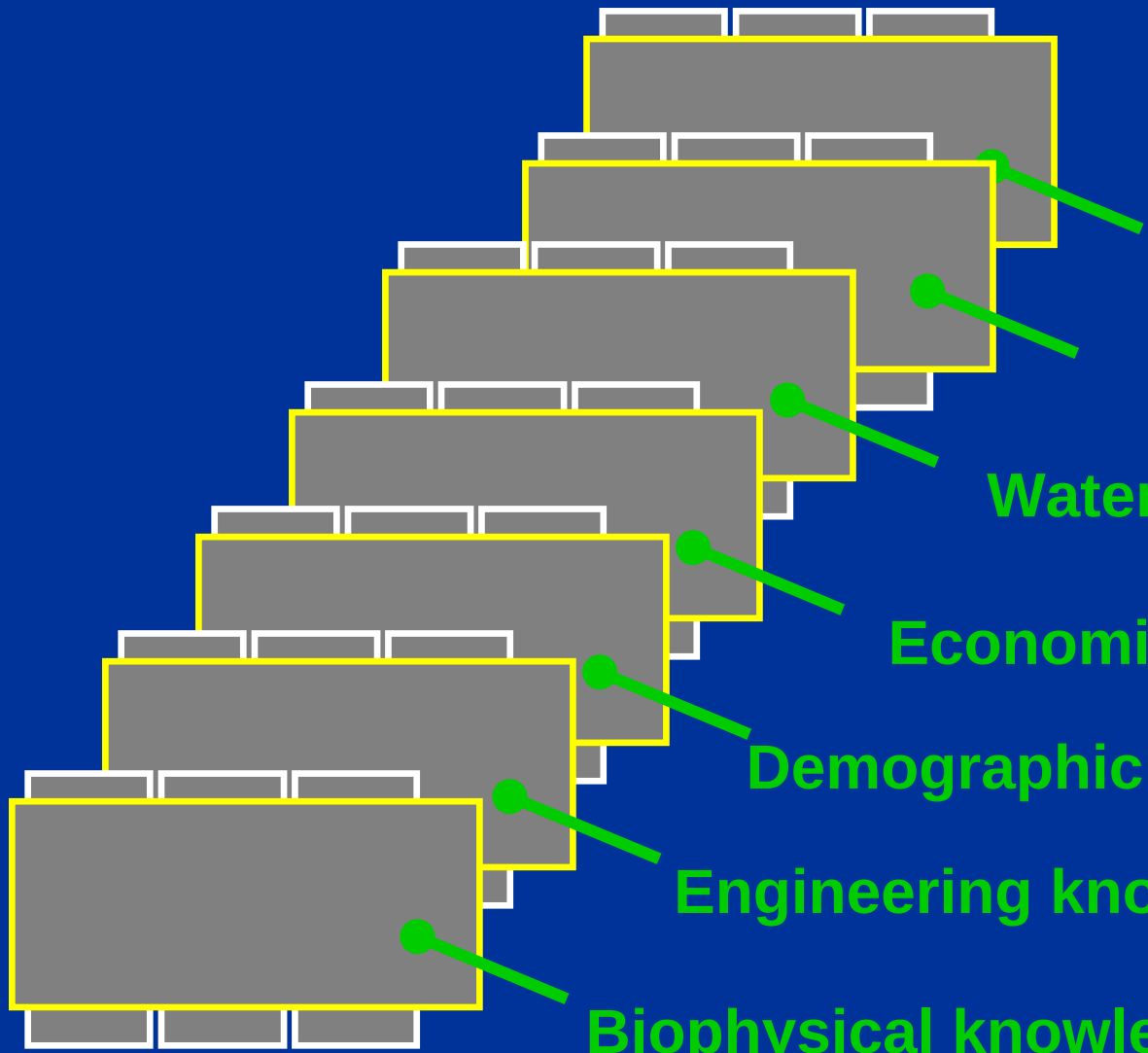
An experimental catchment framework for studying important and locally appropriate hydrological processes

- Key areas of scientific research –
  - Hydrological variability and change
  - Biophysical processes that control movement of water between different elements of the landscape
  - **Hydro-chemical pathways and processes controlling the fate and transport of pollutants**
  - Contribute toward the development and application of global models and remote sensing

The Integrated Catchment Approach



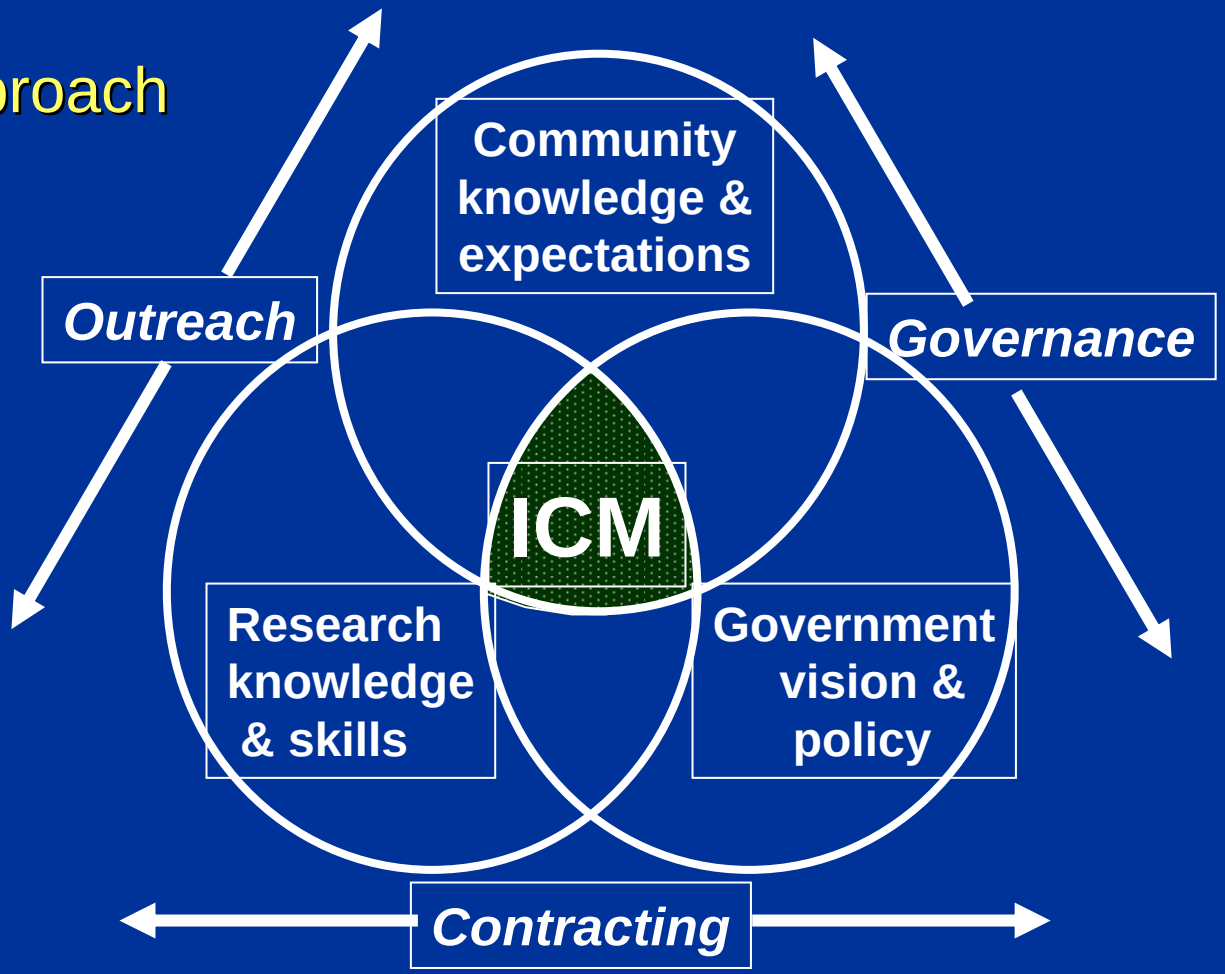
ICM has multiple dimensions



Modified from Motueka HELP group

Integrated Catchment Management

- a partnership approach



After Motueka HELP group

The HELP Process

Two major steps:

- A comprehensive assessment of what we know now (physical, socio-economic, legal, cultural baseline information).
  Iteration between stakeholders and scientists to determine research plan.
- Implementation of research in collaboration between scientists, managers and stakeholders

HELP Basin Criteria

There are 5 categories of criteria:

- **Suitability of the proposing organisation and the basin for inclusion in the programme**
- **Relevance of the stated purpose to the HELP programme**
- **Adequacy and feasibility of the proposed activities**
- **Confirmation of commitment to provide resources and cooperation**
- **Contribution to promoting HELP values**

The detailed criteria are available at

http://www.unesco.org/water/ihp/help

The HELP Basins Groups

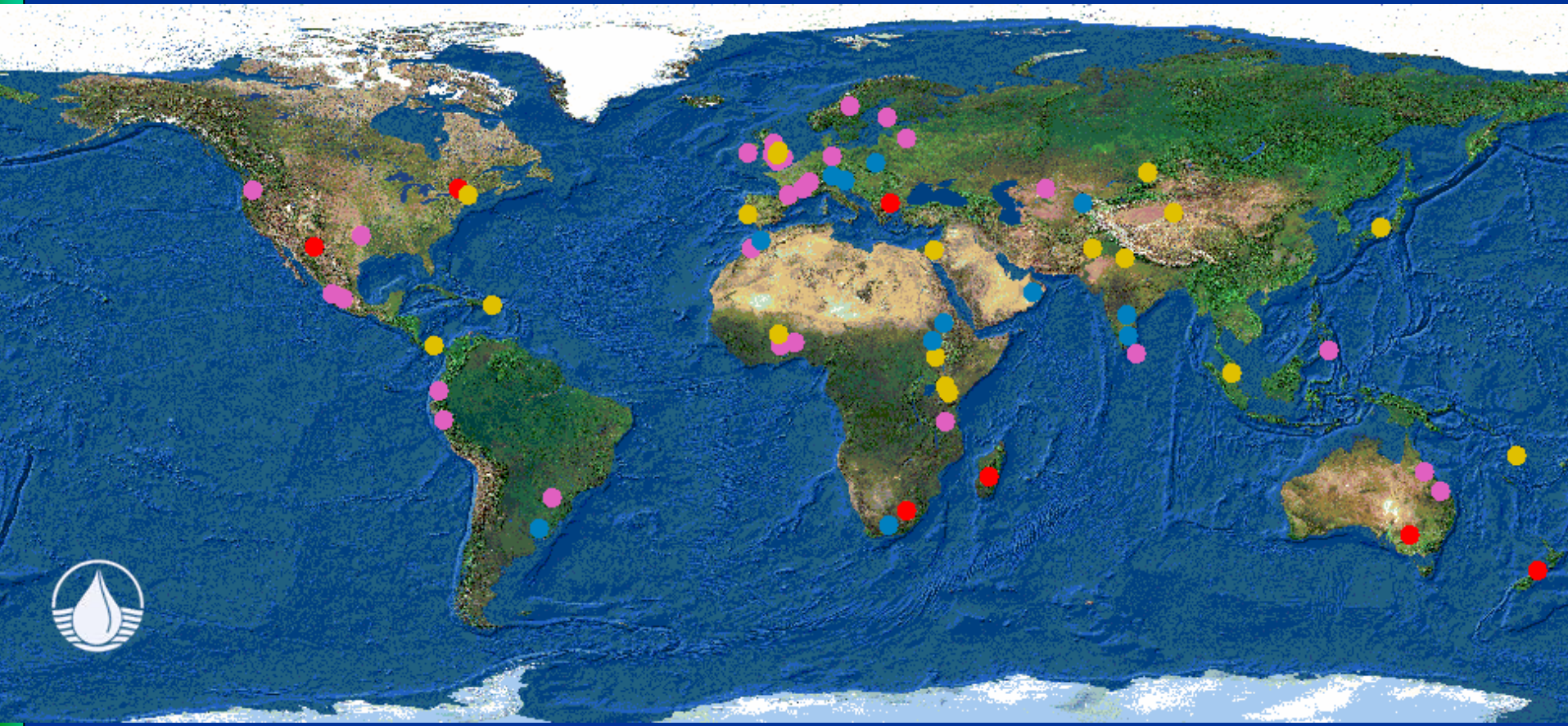
- ***Demonstration* HELP Basin:** A Demonstration HELP basin is seen as demonstrating best practice in Integrated Water Resources Management, with something to offer to other basins.

- ***Operational* HELP Basin:** An Operational HELP basin has implemented the HELP philosophy, and involved most HELP stakeholder groups in basin management.

- ***Evolving* HELP Basin:** An Evolving HELP basins plans to involve HELP stakeholder groups in basin management: it has provided clear commitment to develop a proposed catchment in accordance with HELP principles.

- ***Proposed* HELP basin:** A Proposed HELP basin will need to provide more detail of various aspects described in the nomination form; this basin has achieved initial operational activity and has begun stakeholder involvement.

HELP GLOBAL NETWORK

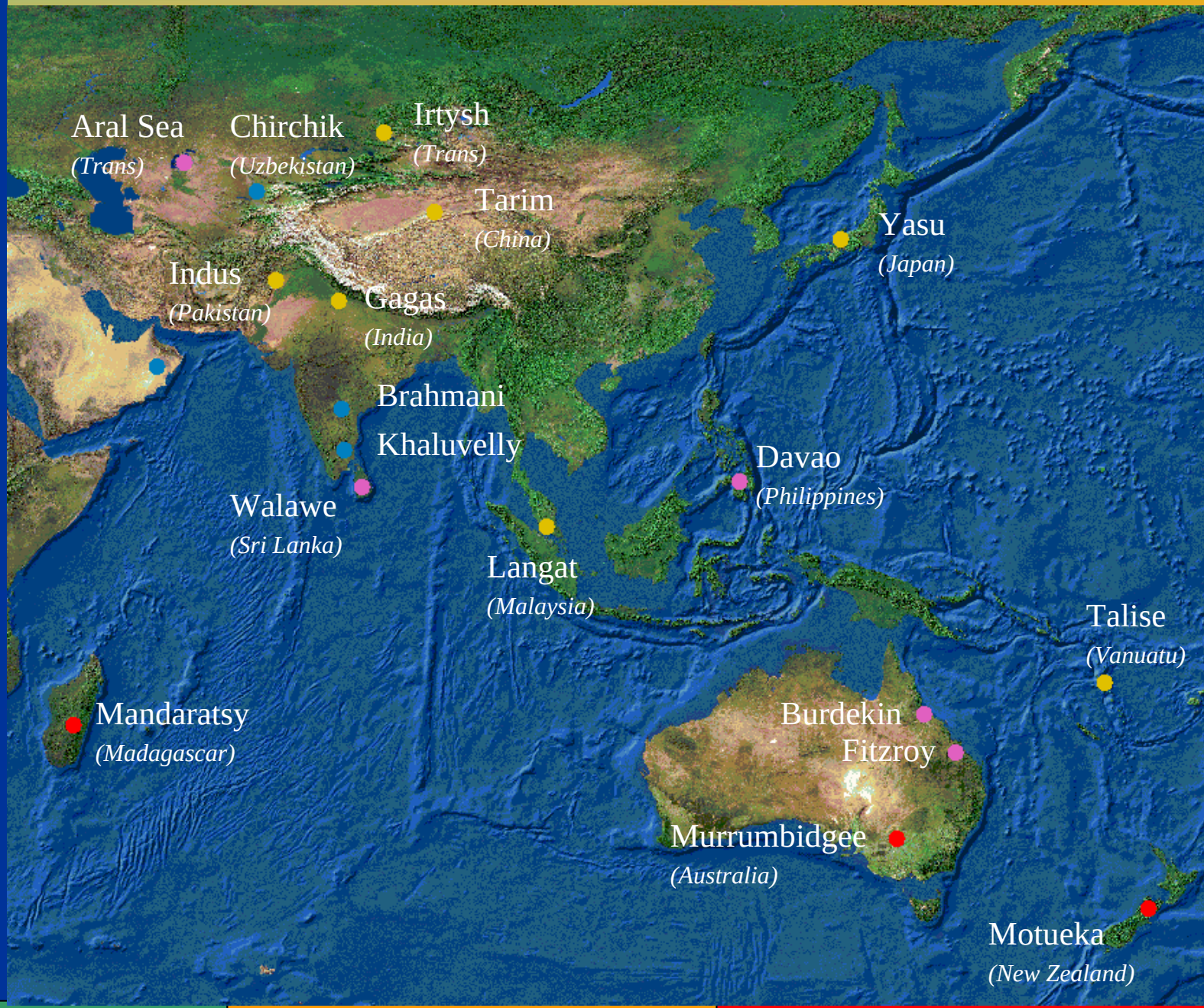


HELP

Nelson, 7-11 November 2005

Categories:

- Demonstration
- Operational
- Evolving
- Proposed



Where are we heading?
Selected Challenges for HELP

- How do we dialogue with stakeholders ?
- How do we interface the water law and policy and science ?
- How do we undertake the necessary scientific research where basin scientific infrastructure is lacking ?

(Thukela HELP Basin, South Africa)

What has been achieved so far?

- A Pilot phase of 25 basins (2001-2004)
- A global network of 67 basins (July 2004 onwards)
- Conferences and workshops:
  - 1st HELP Int. Symposium Kalmar (Sweden) 2002
  - Dundee (Scotland, UK), Int. Conf. on Water Policy and Law interfaces with science, 2001 and 2004.
  - Expert planning group for Integrated Science 2002-2003
  - 1st Expert workshop on transport and fate of diffuse organic contaminants in catchments with special emphasis on stable isotope applications, December 2004 in GSF Munich, Germany
  - HELP Session at the 3rd WWF, “Towards Integrated Catchment Management: Increasing the Dialogue between Scientists, Policy-makers and Stakeholders”, Shiga, Japan, March 2003

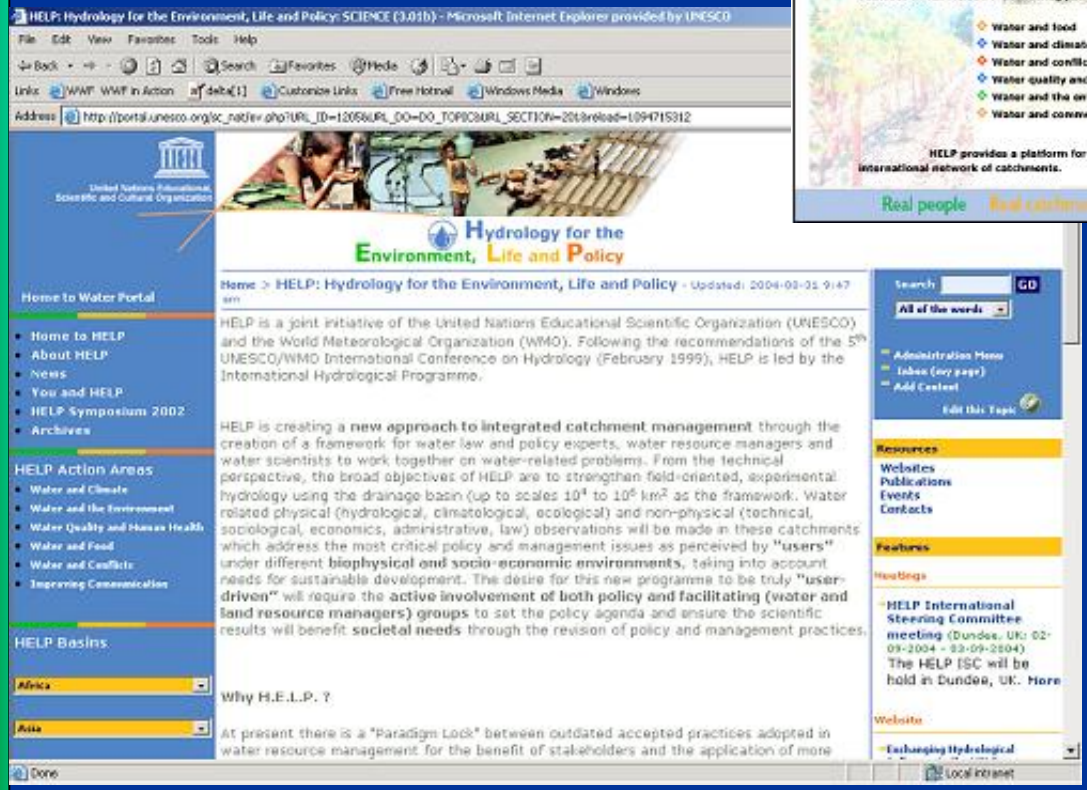
- Forest & Water (in collaboration with FAO-FORC/EOMF and CGIAR-CIFOR)

-- Impact of reforestation-afforestation of degraded lands in the Western Ghats, India. A trend detection project has been initiated linked with the Western Ghats forest hydrology project.

-- Tropical Forest Hydrology Symposium, Kuala Lumpur, July 2000

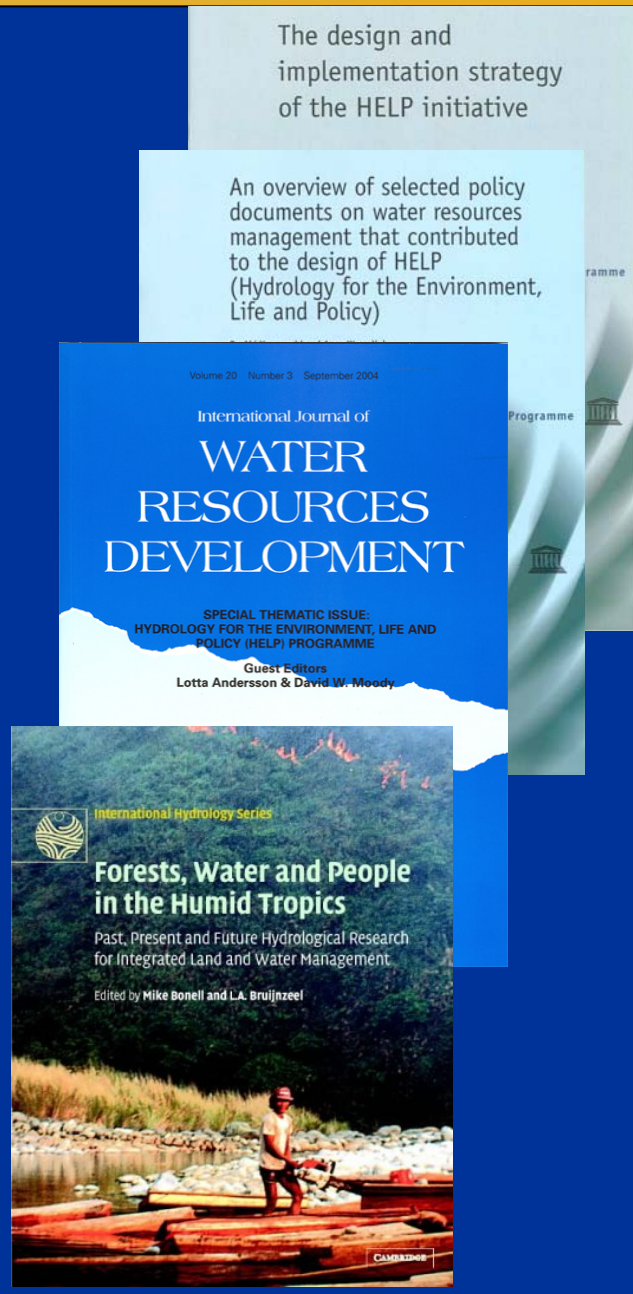
-- Shiga declaration on Forest and Water, November 2002)

- Communication:
  - Brochure
  - Website
  - Newsletter



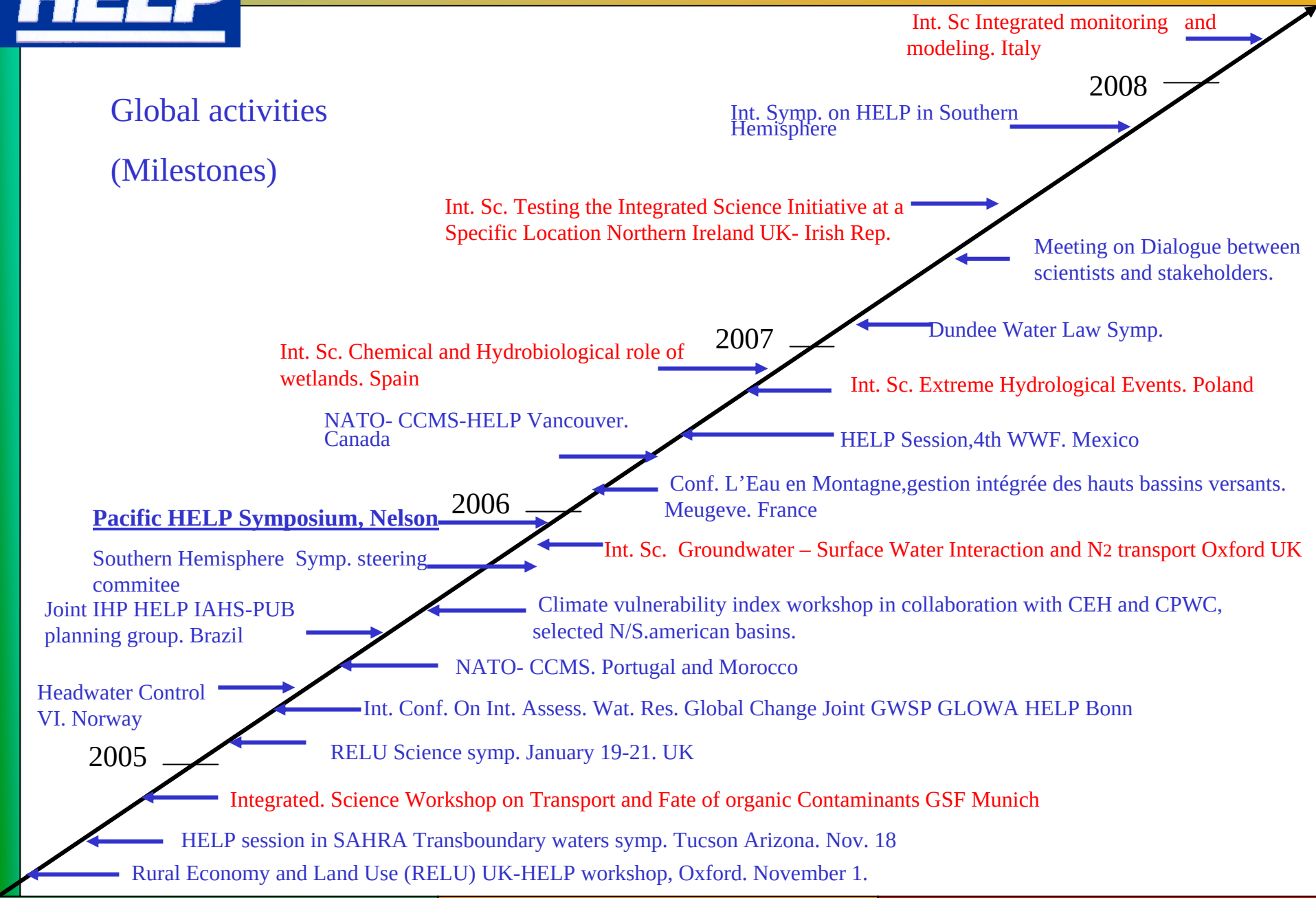
Publications:

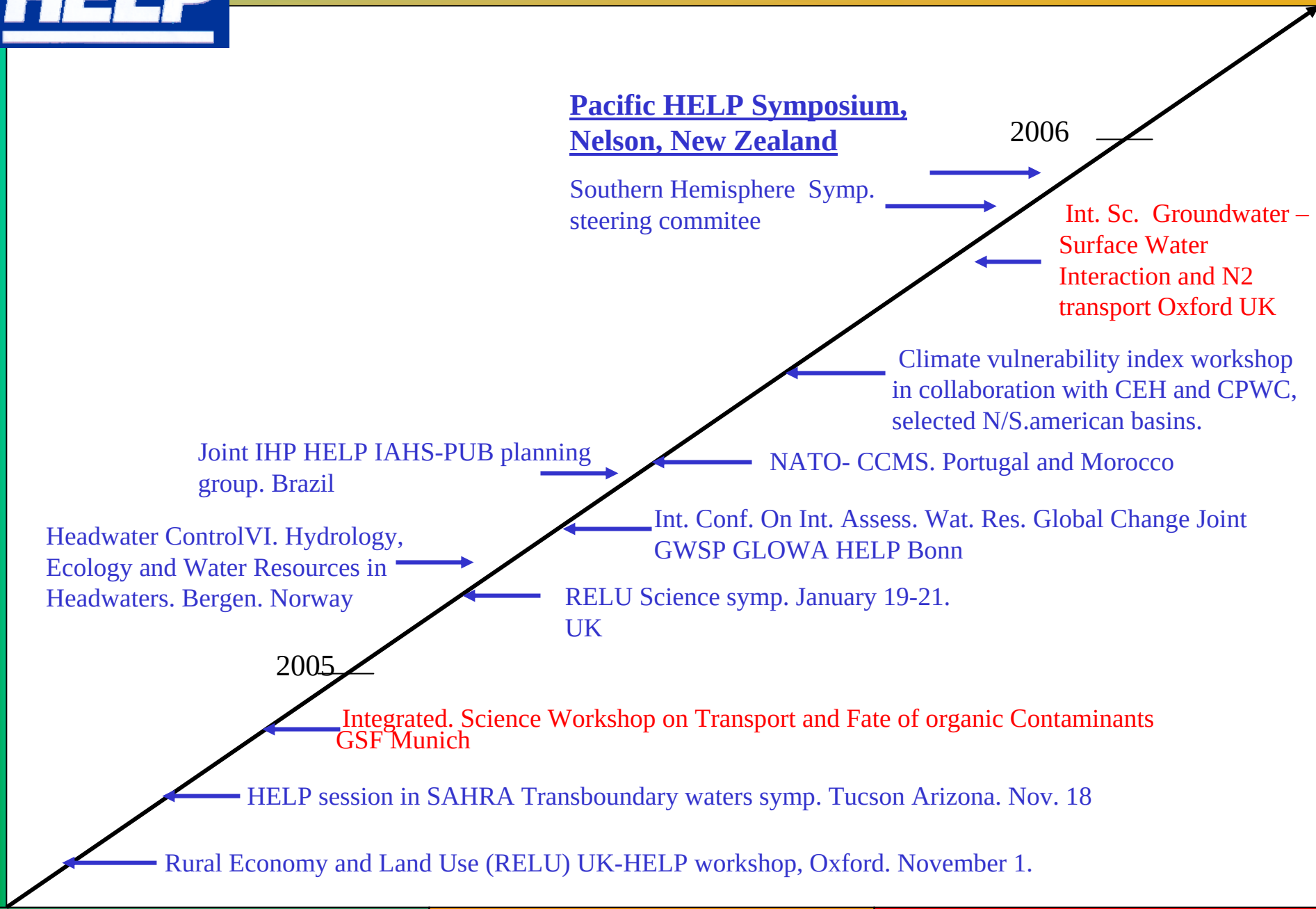
- HELP design and implementation strategy, 2001
- UNESCO IHP Series Technical Documents in Hydrology (38): 46 p. Yamaguchi, A. and Wesselink, A., 2000. An overview of selected policy documents on water resources management that contributed to the design of HELP (Hydrology for the Environment, Life and Policy).
- Article in AWRA journal, 2003
- Special Issue of the International Journal of Water Resources Development (Vol.20, no.3) September 2004
- CUP Book late 2004
- An ongoing book project based on experiences within HELP basins is scheduled to be launched in 2005 and entitled:**"The role of hydrological information in water law and policy: current practice and future potential."** published by IWA

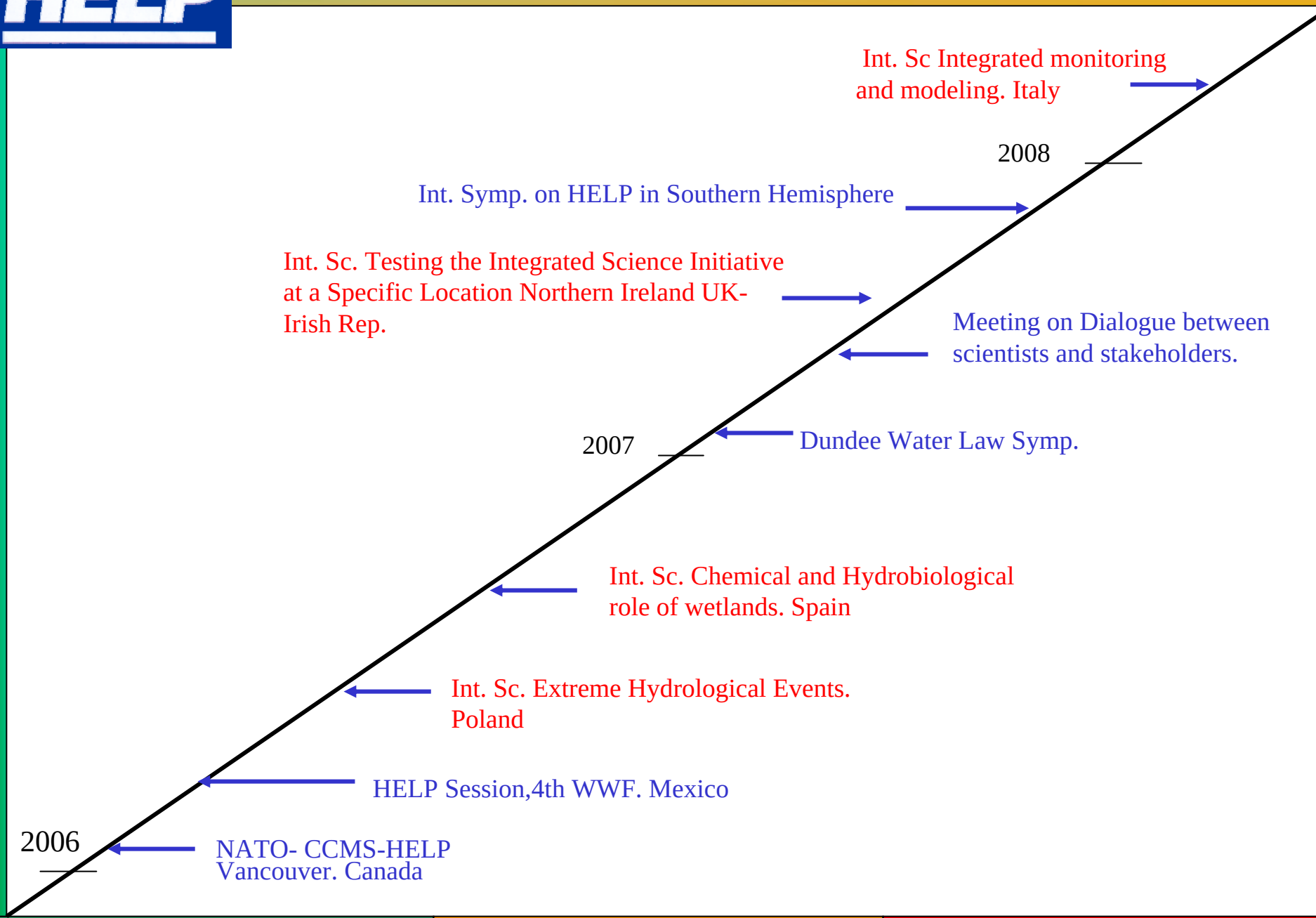


Global activities

(Milestones)




Pacific HELP Symposium, Nelson, New Zealand
2006
Southern Hemisphere Symp. steering commitee
Int. Sc. Groundwater – Surface Water Interaction and N2 transport Oxford UK
Climate vulnerability index workshop in collaboration with CEH and CPWC, selected N/S.american basins.
Joint IHP HELP IAHS-PUB planning group. Brazil
NATO- CCMS. Portugal and Morocco
Int. Conf. On Int. Assess. Wat. Res. Global Change Joint GWSP GLOWA HELP Bonn
Headwater ControlVI. Hydrology, Ecology and Water Resources in Headwaters. Bergen. Norway
RELU Science symp. January 19-21. UK
2005
Integrated. Science Workshop on Transport and Fate of organic Contaminants GSF Munich
HELP session in SAHRA Transboundary waters symp. Tucson Arizona. Nov. 18
Rural Economy and Land Use (RELU) UK-HELP workshop, Oxford. November 1.


Int. Sc Integrated monitoring and modeling. Italy
2008
Int. Symp. on HELP in Southern Hemisphere
Int. Sc. Testing the Integrated Science Initiative at a Specific Location Northern Ireland UK-Irish Rep.
Meeting on Dialogue between scientists and stakeholders.
2007
Dundee Water Law Symp.
Int. Sc. Chemical and Hydrobiological role of wetlands. Spain
Int. Sc. Extreme Hydrological Events. Poland
HELP Session,4th WWF. Mexico
2006
NATO- CCMS-HELP Vancouver. Canada

Planned Symposium in November 2007

HELP in Action

Local Solutions to Global Water Problems - Lessons from the South.

Setting an implementation agenda

Theme 1: Action on the ground - methods and approaches.

Theme 2: New integrating science being developed under HELP

Theme 3: Connecting environment, economy, social and cultural impacts

Theme 4: Institutional and legal lessons for successful HELP implementation

Theme 5: Indicators of HELP success

Theme 6: Implementing HELP in basins with limited resources and capacity

Theme 1: Action on the ground - methods and approaches

- **How is the HELP approach working in your basin(s)?**
- **What methods or mechanisms have been used successfully or unsuccessfully to dialogue with stakeholders in your basin(s)?**
- **How has science connected with communities in your basin?**

Theme 2: New integrating science being developed under HELP

- **Scaling up and scaling down surface groundwater interactions in a basin context**
- **Successful means of integrating across scientific disciplines and across scales**
- **Innovations in integrating biophysical models with social and economic aspects**

Theme 3: Connecting environment, economy, social and cultural impacts

- **How to integrate natural sciences, especially hydrological science, with market economics**
- **How to integrate natural sciences, especially hydrological science, with environmental (ecological) economics**
- **How to integrate natural sciences, especially hydrological science, with social and cultural evaluation, and build social capital**
- **How to integrate hydrological science with Land-Water management and policy**

Theme 4: Institutional and legal lessons for successful HELP implementation

- **How to interface hydrological science with Water Policy and Water Law.**
- **How can science promote conflict prevention/resolution?**
- **How can science promote good water governance?**
- **What is the role of science in implementation and compliance in shared/transboundary waters**

Theme 6: Implementing HELP in basins with limited resources and capacity

- **How can HELP be implemented given limited human, technical, and/or economic resources?**
- **How can the basin be assessed quickly and efficiently?**
- **How can we utilize/complement initiatives such as IAHS-PUB (Predictions in Ungauged Basins)?**

Theme 5: Indicators of HELP success

- **How can we measure the impact of HELP?**
- **What criteria make an indicator most useful in your basin(s)?**
- **What are the barriers for the application of such indicators as far as available data and user capacity are concerned?**

What can be achieved here in Nelson?

We can try to answer the following questions:

- **Is HELP relevant for the Pacific ?**
- **How should HELP (UNESCO) support the Pacific through HELP ?**
- **How should HELP work with existing ICM/IWRM projects and programmes in the region ?**

Thank you for your attention!