

Building Global Citizen Capacity for Watershed Management

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SANREM CRSP
Auburn University

USAID Workshop
June 16, 2004



THE PILLARS

ECONOMIC GROWTH, AGRICULTURE, AND TRADE

Philippines Province Gets Second Green Award



Members of citizens' volunteer groups called Tugbohan Ribig (River Watchers) monitor river water quality in the province of Bukidnon, Philippines. The prize was earned as a result of USAID support for the Sustainable Agriculture and Natural Resource Management (SANREM).

MANILA, Philippines—For the second year in a row, the province of Bukidnon in Mindanao was awarded in 2003 the title of “cleanest and greenest” province in the Philippines from the Office of the President of the Republic of the Philippines.

This achievement is largely a result of 10 years of investment by USAID’s Bureau for Economic Growth, Agriculture, and Trade (EGAT) in Sustainable Agriculture and Natural Resource Management (SANREM), which is one of nine U.S. university research centers funded by EGAT.

“You could clean a river and three months later it will be as dirty as before,” said Carlos A. Perez, SANREM program director. “But this award is for something much more comprehensive. Natural resources in the area will be protected, because we have developed technologies and trained cadres of people who can continue to monitor and manage the environment in sustainable ways, even after program’s funding ends.”

Bukidnon, a landlocked province that is home to a million people, is known as the watershed of Mindanao, with five major rivers. A tributary of one river was also recognized as “cleanest” for lowest level of contamination.

EGAT first funded SANREM in 1992, when an influx of migrant and business increased the use of natural resources in Mindanao and led to pollution caused mainly by deforestation, soil erosion, and high use of pesticides by pineapple, banana, and cotton plantations.

SANREM researchers trained citizens vol-

untary groups—called Tugbohan Ribig—to monitor water quality in three provinces in the Philippines, including Bukidnon, since 1994. Since then the groups have collected more than 4,000 water samples from 58 sites on 16 water bodies in three provinces in the Philippines, including Bukidnon.

SANREM researchers measure soil and nutrient losses and their relationship to conservation practices in farming and forestry. They also estimate how prices, trade, and infrastructure policies affect land use and riparian resources.

The researchers work closely with policymakers and help citizens promote environmental protection laws. Many researchers are on water and environmental authority boards.

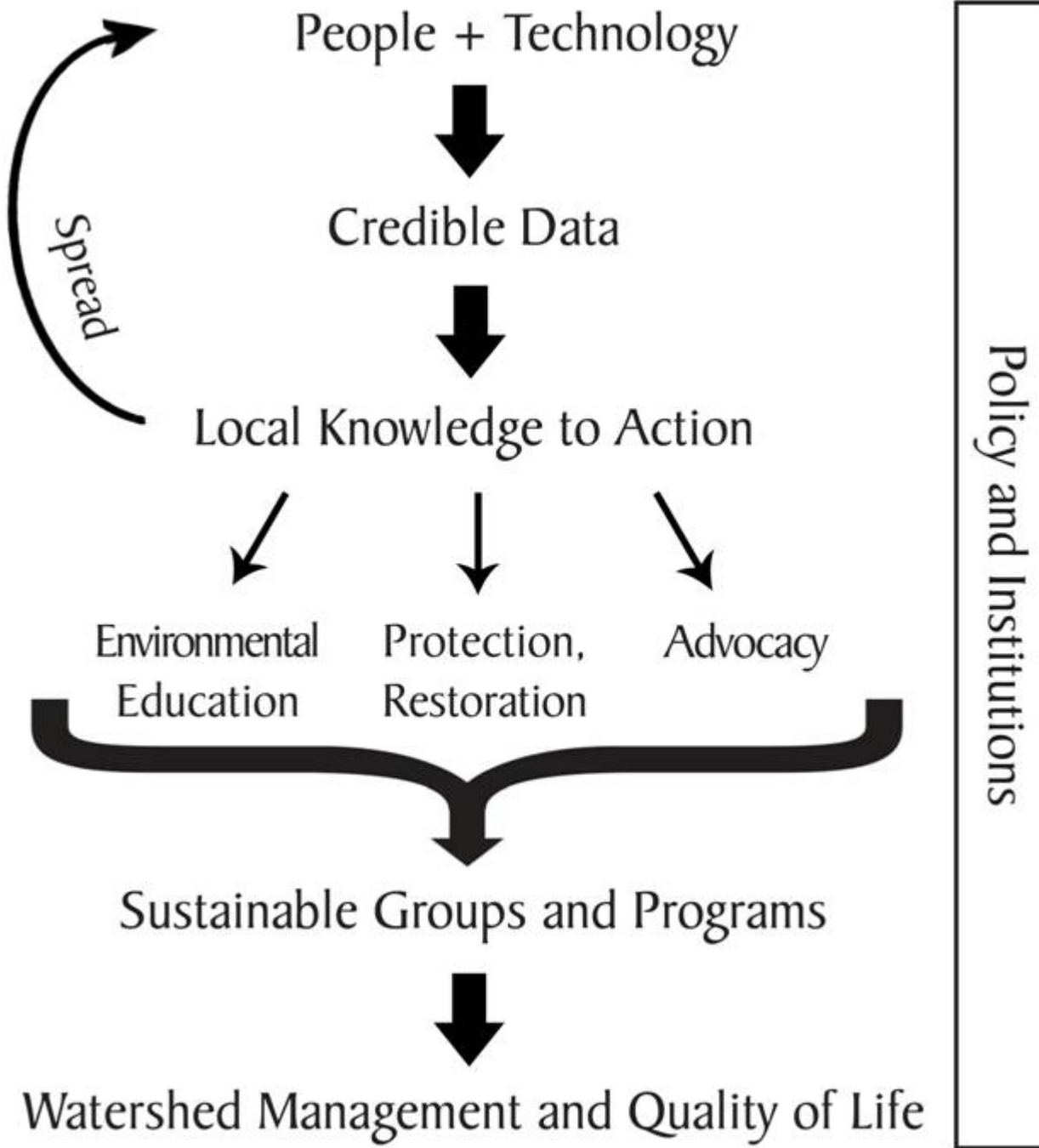
For example, one is a member of the Provincial Watershed Protection and Development Council, responsible for watershed management plans. Another is the consultant of the provincial governor as well as of the Protected Area Management Board of the Mount Kitanglad Range Natural Park.

In February 2004, SANREM was asked by the Bukidnon governor to train planners in 18 municipalities and two cities in the use of geographic information systems in resource management planning.

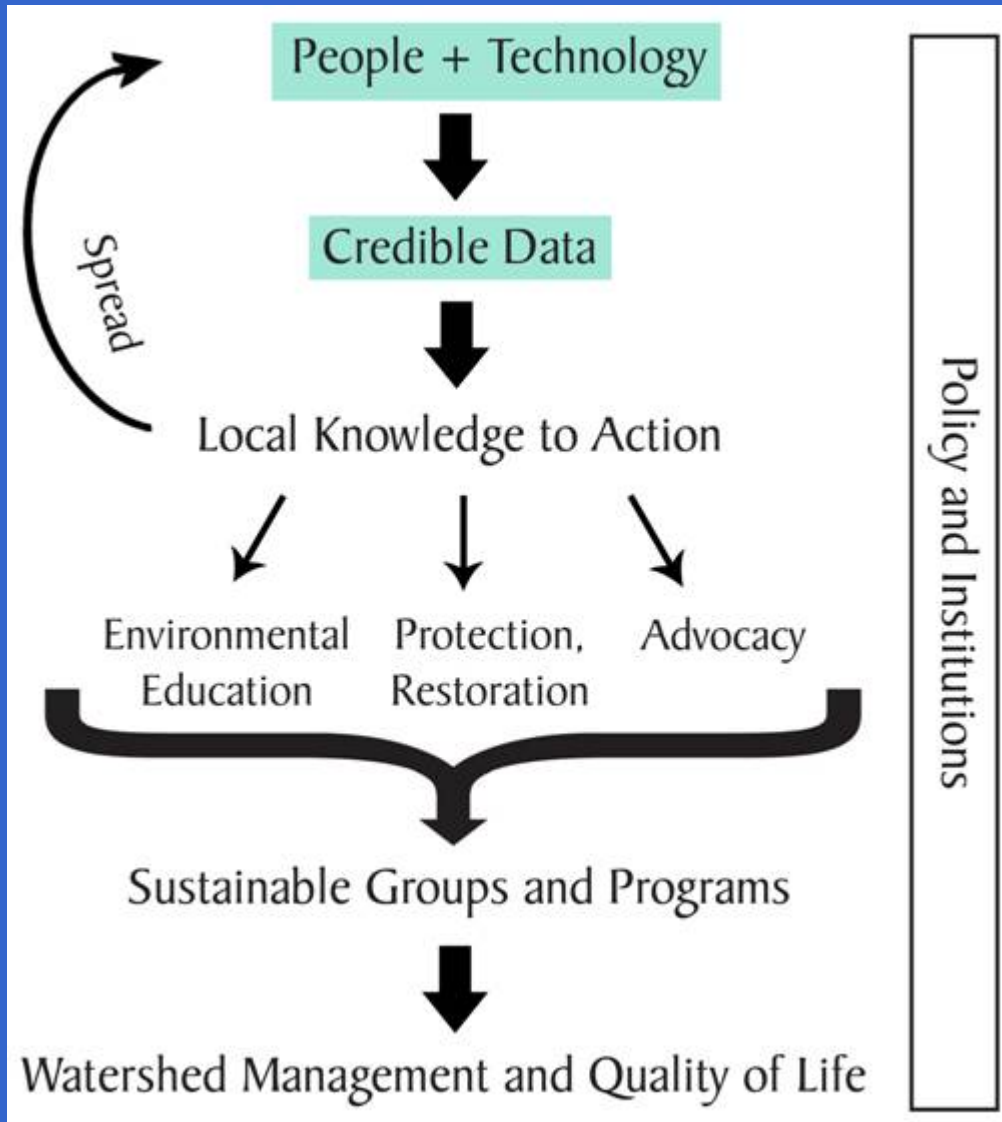
Aside from SANREM, USAID supports a number of natural resource management programs run by NGOs in the Philippines and Southeast Asia. ★

“...this award is for something much more comprehensive.”

-Carlos Perez,
SANREM Director



CBWM - Part I





Priming Activities

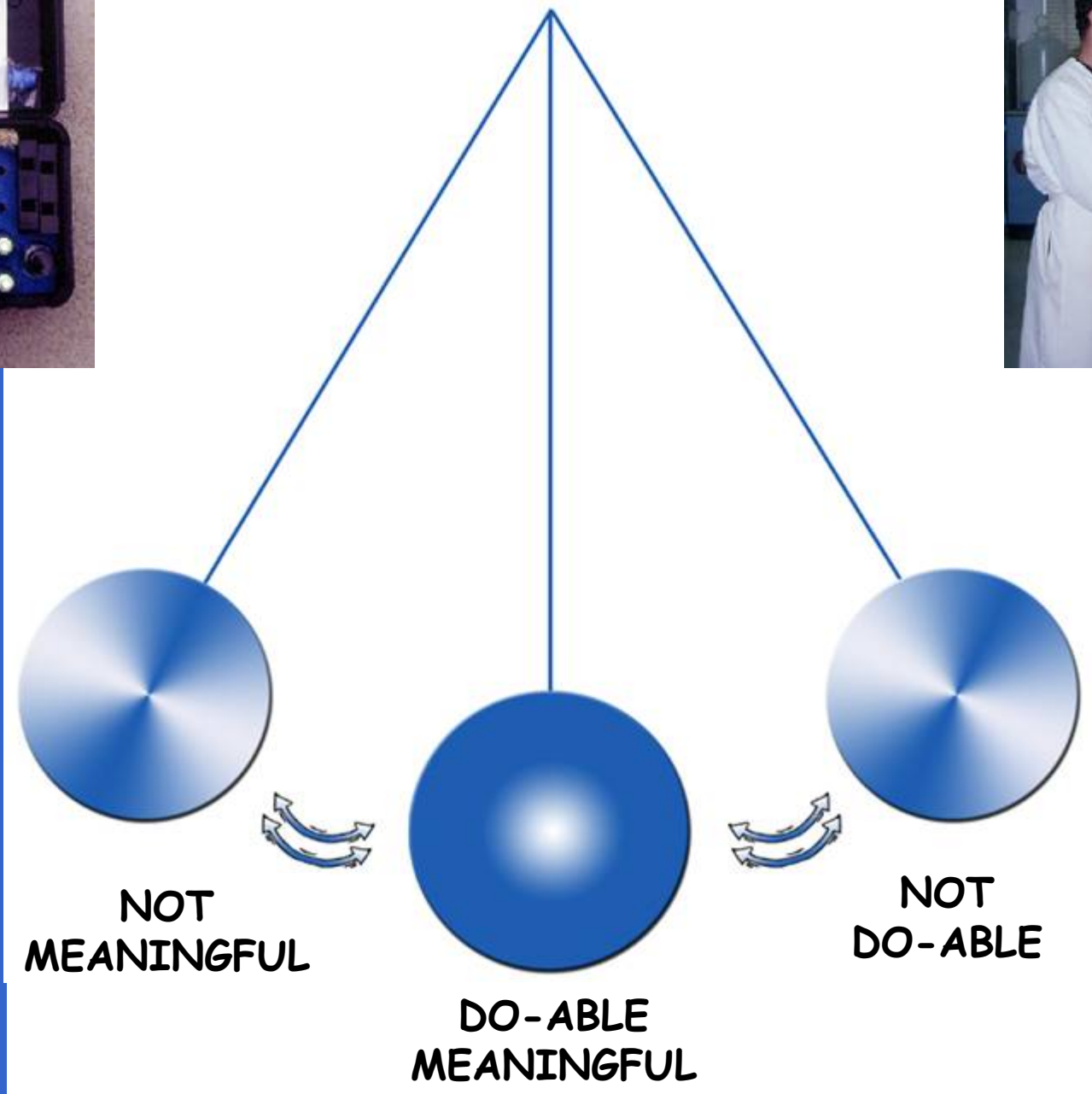
First Workshop



Monitoring in Philippines

58 sites on 16 waterbodies in 3 Provinces

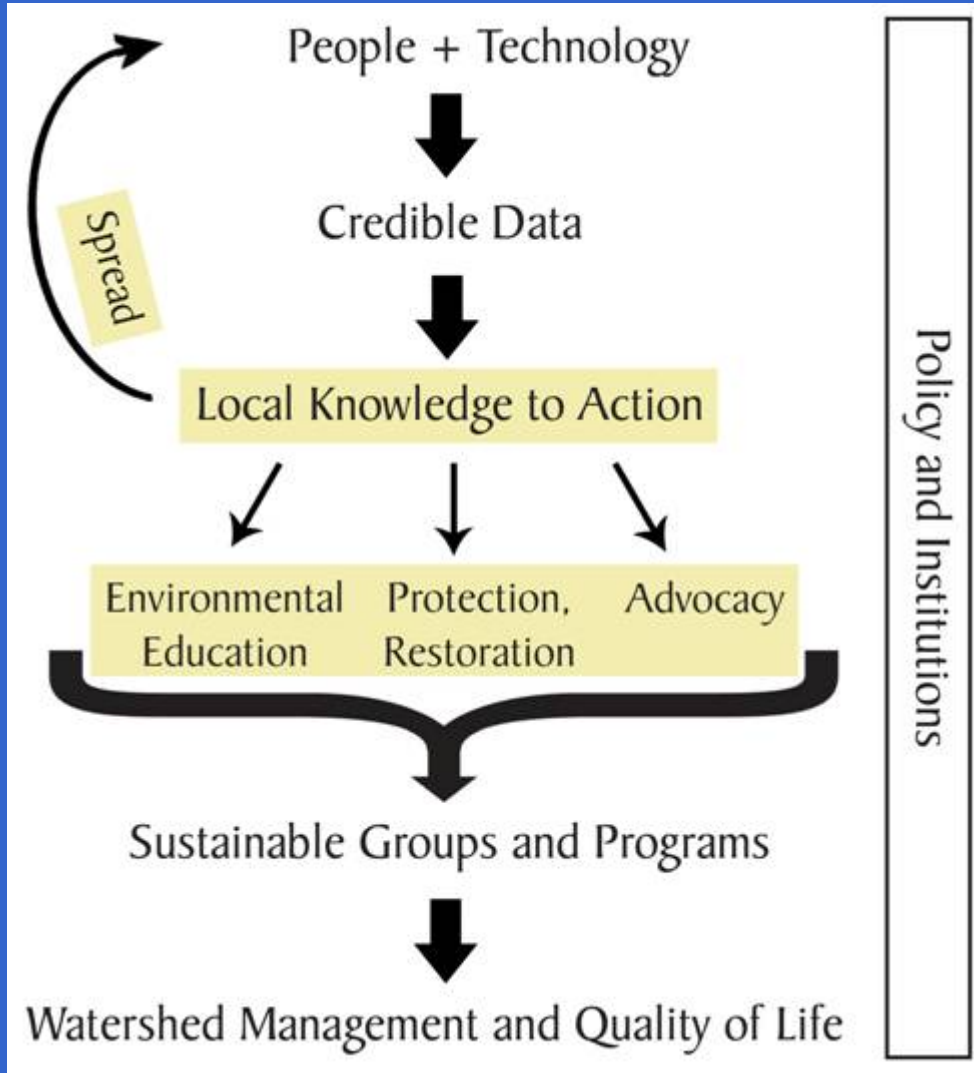




Lessons Learned

- *A successful CBWM program requires much more than technology transfer of test kits.*
- *Building trust and capacity are essential complements to technical training.*

CBWM - Part II



Local Knowledge to Action

Multi-year Trends

Upstream -
Downstream

Seasonal
Changes

"In the 1970's, I saw all the rivers get used for everything. I joined the TW in 1994 to know the quality of the rivers. The interest is because of the learnings...to know what's safe."

-Nita Regalado

Inter-
watershed

Climatic
Events

Human Land Use

Action Strategies

- Environmental Education
- Protection, Restoration
- Advocacy, Policy
- Spread

Environmental Education

- Environmental Pen Pals
- DECS Endorsement
- TW in the Classroom



Protection / Restoration



Watershed
Council and TW

Bamboo
Streambank
Restoration
Project



Advocacy / Policy



➤ Natural Resource Management Plans

➤ MKAVI Development and Water Use



➤ Policy Briefs for Congress and Clean Water Act

Spread



➤ Bukidnon

➤ Sarangani

➤ Bohol

➤ Baungon



Expansion in Southeast Asia

• THE NEWSPAPER YOU CAN TRUST •

Bangkok Post

MONDAY, AUGUST 14, 2006 • 20 BATH

CONSERVATION



Akha tribespeople collect water samples from a stream for quality testing. The hilltribe is trying to prove it can also take good care of its own water resources.
— THEENWAT KUMMITA

Akha village joins water watch project

Tribe working to keep their streams clean

Therawat Khamthita
Chiang Mai

The best way to keep water in mountainous regions clean is to let the hilltribes take care of it.

Akha people at Saensuk village are trying to prove that they can be the guardian of four streams.

The village of 813 households in Chiang Mai's Mae Chan district has planted trees on 300 rai of land since 2001 and is determined to increase that by 100 rai every year.

It has now been picked by the province as a pilot project on water conservation as part of the Global Water Watch of Auburn University in the United States and Heller International, a US-based non-profit agency promoting sustainable living, to monitor the quality of water around the globe.

Last weekend, about 200 villagers joined a workshop held by the province and the two organizations focused on arousing awareness about water conservation by training them to use basic equipment to test the water quality in Mae Salang, Mae Salong, Huay Muli-khang and Mae Puen.

Towns have found no chemical substances in the four streams, which are the main water sources of villagers for both drinking and farming.

They were urged to keep the four streams clean by avoiding the use of chemicals in growing vegetables which are mostly grown along the banks of the streams.

Therawat Phadapant, the village headman, said his community would stop using chemicals altogether to make sure that the streams do not get polluted.

Chemical fertilizers are widely used by vegetable growers in the province.

Wanai Lertnattarawong, a deputy district chief, said many had only just realized how chemical use could damage the environment and health. A campaign was also being undertaken to promote organic farming among them, he said.

Bill Deutch, an academic at Auburn University, said the university would continue to help the villagers by updating them with new measures to help protect the environment.

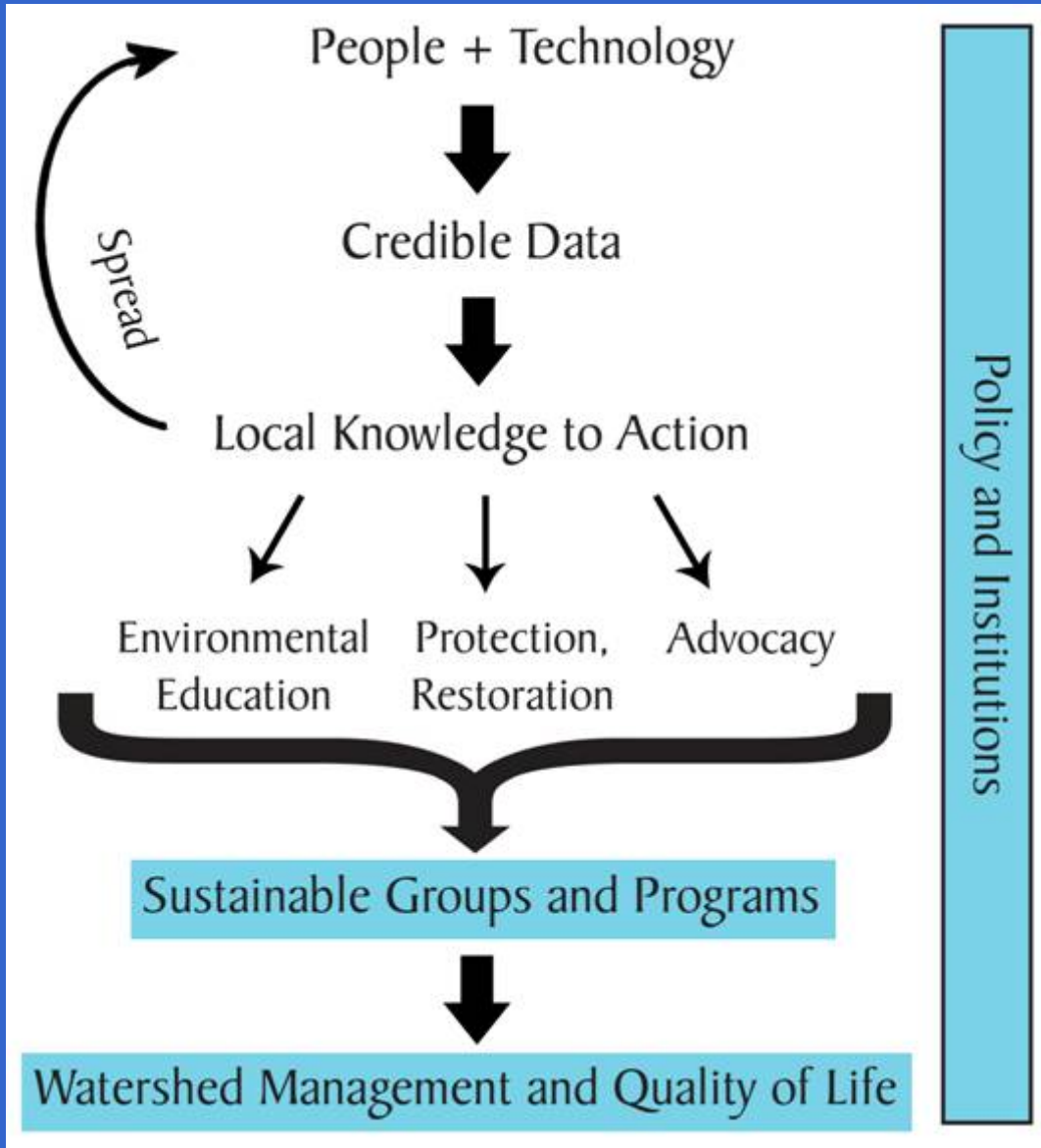


- Thailand
- Cambodia
- China
- Vietnam

Lessons Learned

- *Community groups with relatively little formal education can understand the basics of complex watershed processes.*
- *Spread of CBWM programs cannot be orchestrated or forced, and is sometimes impossible regardless of effort and incentives.*

CBWM - Part III



Sustainable Groups



- Local Trainers
- Links to Local Government and Business
- Local Support



Sustainable Programs Transformed Institutions

- ICAAE/ICARA
- HI Agroecology Initiative
- HI/ICAAE MOA



CBWM Projects

U.S.

International

NGO

GO

GO

NGO

Foundations

AWWA

EPA/
ADEM

USAID

HPI

CCF

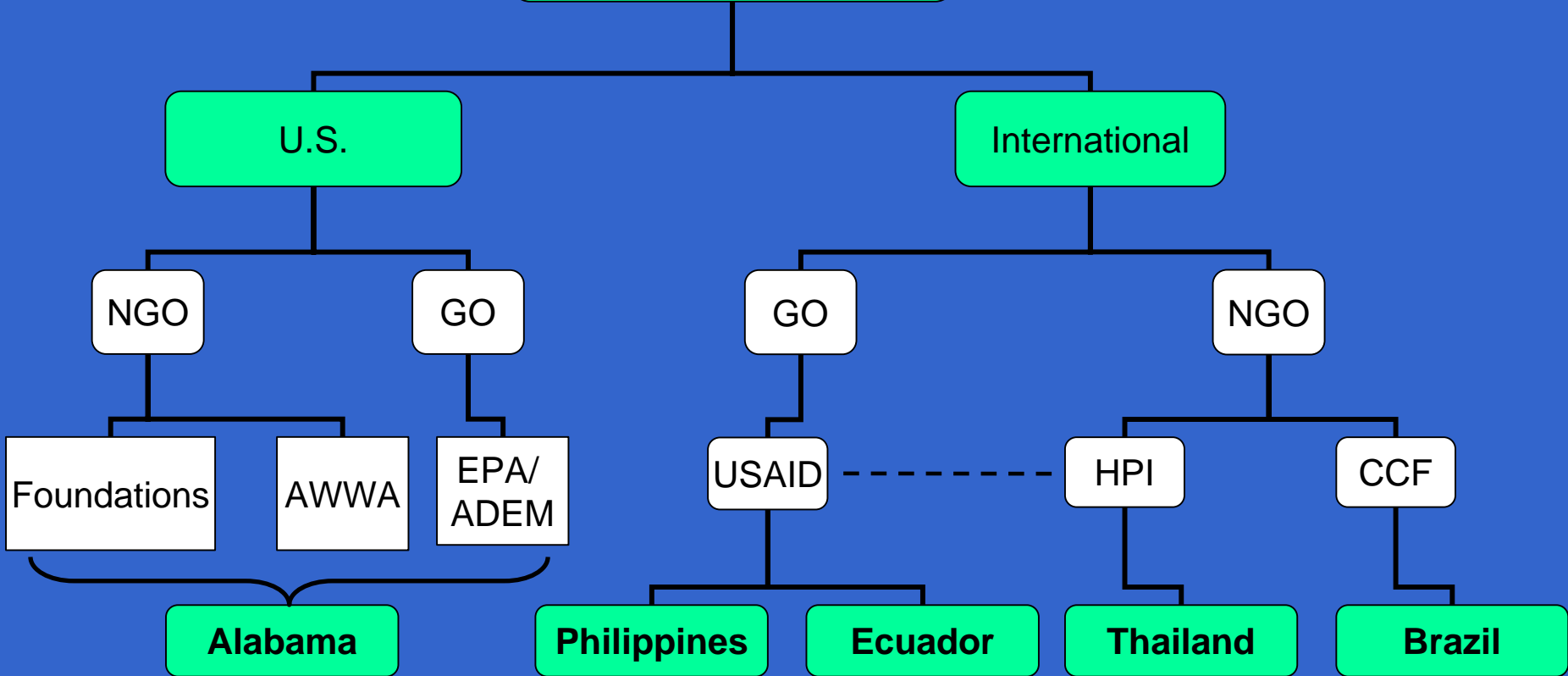
Alabama

Philippines


Ecuador

Thailand

Brazil



Worldwide Network of CBWM Groups




Who We Are What We Do Where We Work Partnerships

Global Water Watch Program

Global Water Watch is a newly formed organization consisting of partnerships from a worldwide network of community-based water monitoring groups.

There is a growing interest among community groups to participate in Watershed management and become personally involved in water monitoring. Global Water Watch (GWW) provides a support network for groups who agree to use standardized monitoring techniques that are accurate yet relatively simple and inexpensive.

Global Water Watch
Siwngle Hall, Room 203, Auburn University
[Contact Us](#)




Philippines

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Address <http://www.globalwaterwatch.org/pww.aspx> Go Links



Global Water Watch


A worldwide network of community-based water monitoring groups

GWW Home Philippines Site Data Sites Site Photos

Welcome to the
Global Water

- Chemistry Histories
- Discharge Histories
- Suspended Solids - Histories
- Suspended Solids - Statistics

Global Water Watch aims to understand aquatic ecosystems, and uses of alterations of water resources as components of sustainable management. Measures of water quality and quantity are indicators of sustainable land use. The work plan proposes physicochemical and biological characterization of surface waters at the study sites. The activity will train and equip residents of the Philippines, to be monitors and provide scientifically valid water resource data. (PWW Web site last updated 2/12/04)



For more info please contact us at:

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Auburn, Alabama 36849-5419
Phone: (334) 844-9228 Fax: (334) 844-9208

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PWW Sites by Waterbody... - Microsoft Internet Explorer

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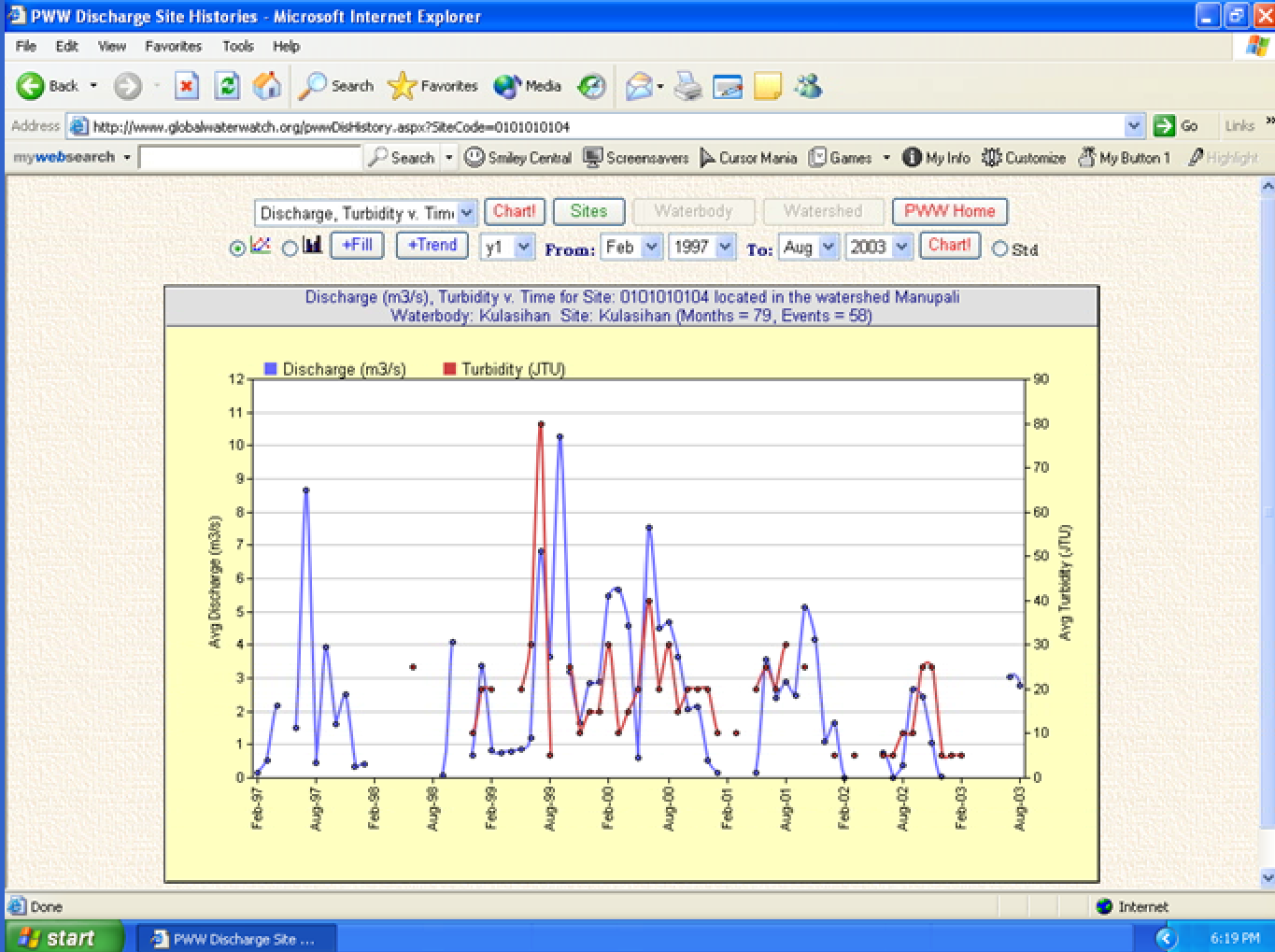
Watershed Waterbody **PWW Home**

Recs: 11 [Counts](#)

Site Code	Prev. Site Code	Watershed	Waterbody	Site Description	Station	# Chemistry	# Discharge	# Solids	Last Discharge Date
0101010101	1010101	Manupali	Alanib	Tugasan	T-1	74	78	184	10 Aug 2003
0101010102	1010102	Manupali	Maagnao	Maagnao	M-2	79	78	200	10 Aug 2003
0101010103	1010103	Manupali	Alanib	Alanib	A-3	79	77	204	17 Aug 2003
0101010104	1010104	Manupali	Kulasihan	Kulasihan	K-3	83	58	165	11 Aug 2003
0101010138	1010138	Manupali	Alanib	Alanib Mkawi		3	16	0	11 Jan 2003
0101010139	1010139	Manupali	Maagnao	Maagnao Mkawi		3	11	0	17 Aug 2003
0201010101	2010101	Luan	Luan	Luan	NV	27	7	20	20 Sep 2002
0201010102	2010102	Luan	Ticulab	Ticulab	NV	27	7	21	20 Sep 2002
0201010103	2020103	Maitum	Malalag	Malalag	NV	27	4	21	20 Mar 2002
0201010104	2030104	Kalaong	Kalaong	Kalaong	NV	22	8	16	17 Jan 2003
0201010105	2030105	Kalaong	Upo	Upo	NV	27	6	21	20 Sep 2002

<http://www.globalwaterwatch.org/pwwDisHistory.aspx?SiteCode=0101010104> Internet

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Community-Based Water Monitoring
Global Experiences for Practical Programs in Watershed Management



...SANREM Legacy