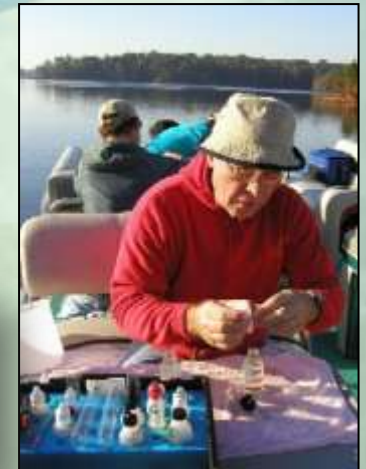
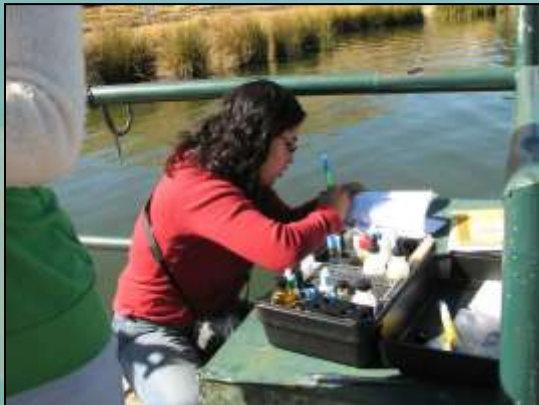


# Global Water Watch: An Update of Watershed Stewardship Beyond Alabama



**Sergio S. RuizCórdova  
& Dr. Bill Deutsch  
Global Water Watch**



# EMPOWER

## Knowledge Is Power

How does meat impact our Earth's water supply?





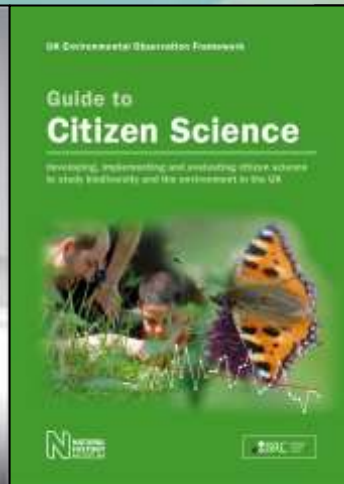
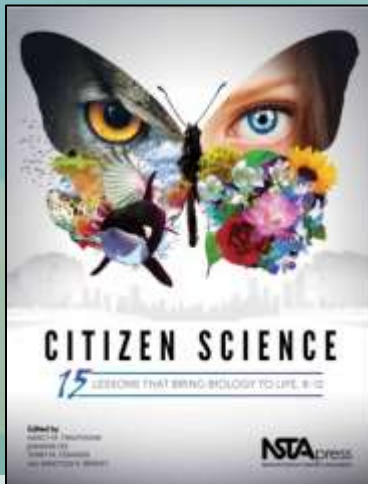






# The Rise of Community-Based Water Monitoring

- Global Environmental Movement
- Decentralization of Natural Resource Management
- Limited Resources/Availability of “Professional Monitors”
- New Monitoring Methods: Simple, Inexpensive, Accurate Kits
- Improved Communication; Online Databases
- Interest in Personal Involvement with Environmental Protection





# The Auburn University School of Fisheries, Aquaculture and Aquatic Sciences

International Center for Aquaculture and Aquatic Environments



AUBURN UNIVERSITY

ALABAMA AGRICULTURAL  
EXPERIMENT STATION

WATER RESOURCES CENTER





GWW  
Monitors



GWW  
Program

GWW Inc.

**Global Water Watch**  
Community-Based, Science-Based Watershed Stewardship

ABOUT GWW | WHAT WE DO | GET INVOLVED | RESOURCES | PROJECTS

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Njogu Kahura  
(Kenya)

Jay Lamar  
(USA)

Sam Fowler  
(USA)



The mission of GWW is to improve water quality, water policy and public health through citizen monitoring and action.



# Water Monitoring Types



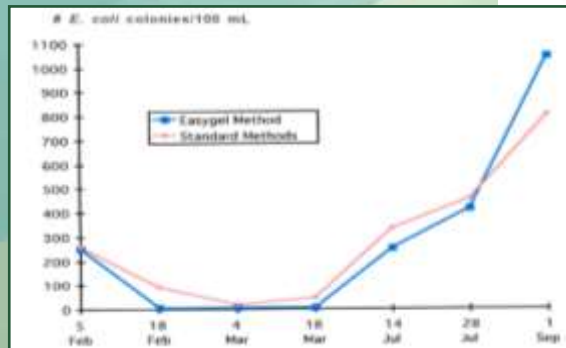
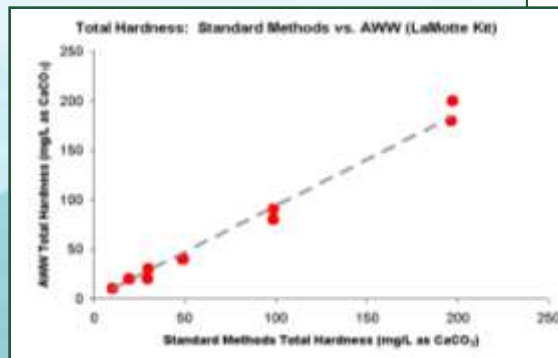
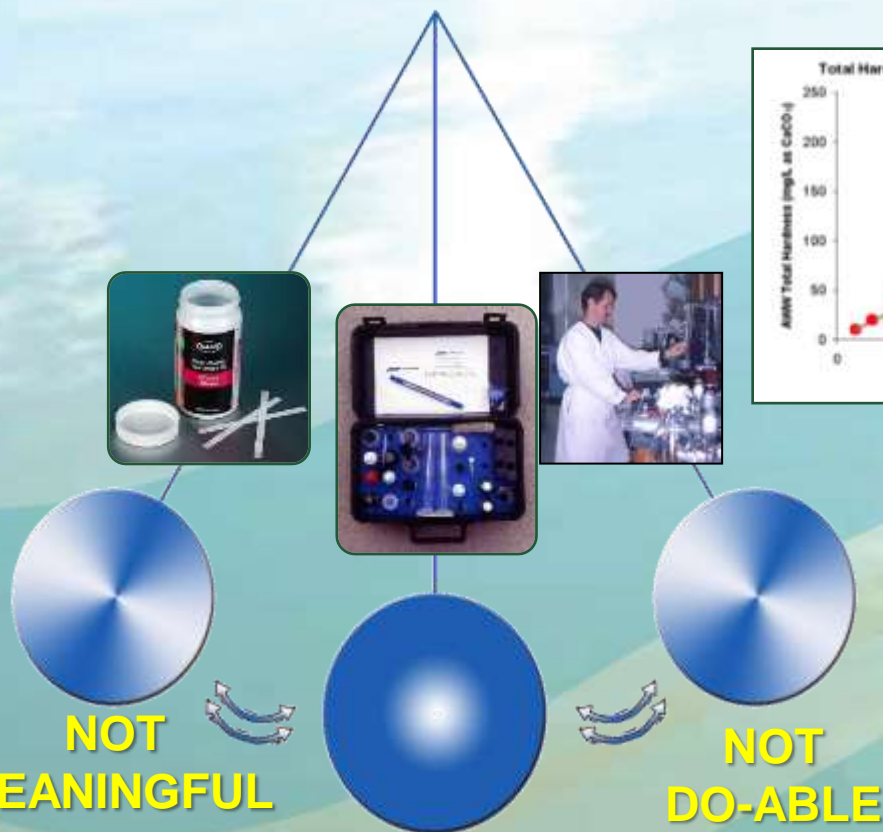


# Total Suspended Solids and Stream Discharge Monitoring



# THE QUEST FOR CREDIBILITY OF CITIZEN DATA

## QAQC Plans: comparing GWW methods and standard methods



### Quality Assurance Project Plan (QAPP)

For the GWW-GOMA Project

Fostering Environmental Stewardship of the Gulf of Mexico:  
A Trans-Boundary Network of Water Education and Monitoring for  
Animal Producers, Classrooms and Community Volunteers

For Water Quality Assessments including:

Water Chemistry Monitoring and  
Bacteriological Monitoring

Submitted to:

U. S. Environmental Protection Agency, Region 4  
Gulf of Mexico Program Office

### 1 TITLE AND APPROVAL PAGE

Project name: GWW-GOMA, Fostering Environmental Stewardship of the Gulf of Mexico: A Trans-Boundary Network of Water Education and Monitoring for Animal Producers, Classrooms and Community Volunteers  
Responsible Agency: Global Water Watch, Auburn University - International Center for Aquaculture and Aquatic Environments  
Date: November 23, 2010

#### Project QAQC Officer Signature

Mr. Sergio S. Ruiz-Cortez  
Bios. Quality Coordinator  
Global Water Watch  
GWW-GOMA Project Coordinator  
Auburn University, Alabama 36849

*Sergio S. Ruiz-Cortez*  
11/23/10

#### Project Manager Signature

Dr. William G. Deutsch  
Alabama Water Watch Program Director  
Global Water Watch Program Director  
GWW-GOMA Project Director  
Auburn University, Alabama 36849

*William G. Deutsch*  
11/23/10

#### USEPA Project Officer Signature

Dr. Troy Parris  
U.S. EPA Project Officer  
Gulf of Mexico Program Office, EPA/GOMPO  
Bioscience Resource Center, Mississippi 39202-6000

*Troy Parris*  
12/17/09

#### USEPA QA Officer Signature

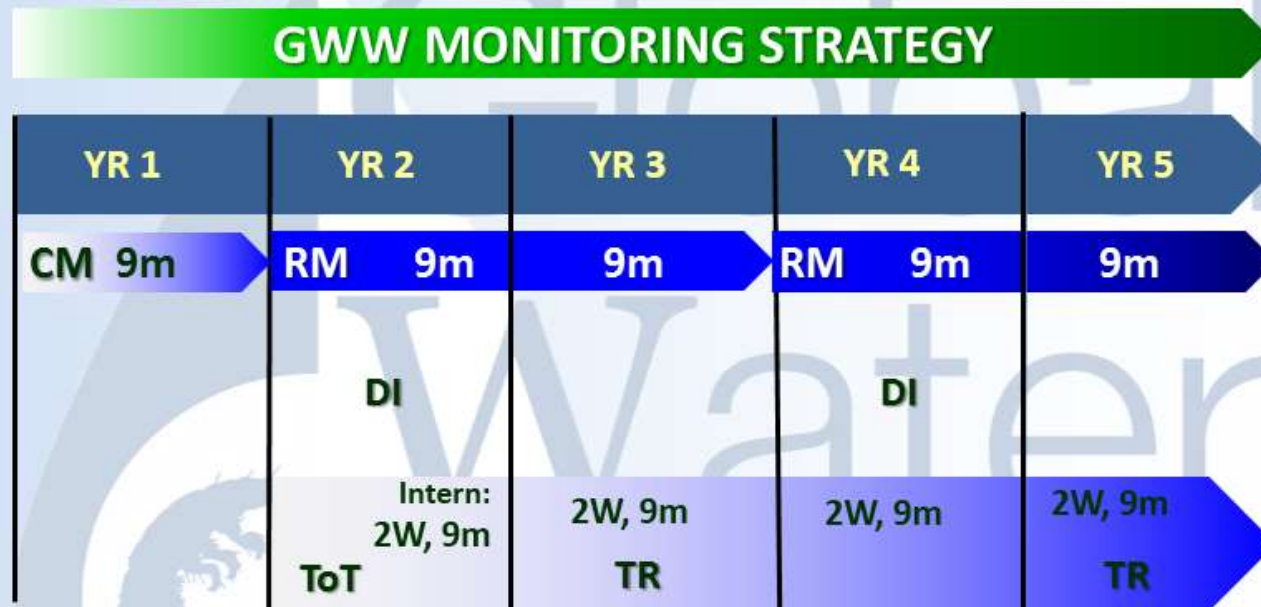
Dr. Danny Francis  
Quality Assurance Manager  
U.S. Environmental Protection Agency, Region 4  
17 Forsyth Street, SW, Atlanta, GA 30303-8000

*Danny Francis*  
12/17/10



# GLOBAL WATER WATCH WORK STRATEGY

## Community-Based, Science-Based Watershed Stewardship



**CM** – Certification of monitors  
**RM** – Recertification de monitors  
**ToT** – Training of Trainers  
**TR** – Trainer Refresher

**W** – workshop conducted  
**m** – monitoring event  
**DI** – Data Interpretation

# So, WHAT IS (OR IS NOT) GLOBAL WATER WATCH ?

Global Water Watch (GWW) is a network of individuals that promote Community-Based, Science-Based Watershed Stewardship (CBWS) aiming to raise environmental awareness and engage citizens to exercise a rational use of natural resources, considering its protection and sustainability. GWW uses monitoring of surface water (rivers and lakes) and water supply in communities, as the axis of CBWS in a participative process, which facilitates community monitoring activities to identify and confront environmental problems.

- ✓ Encourages long-term monitoring, with ample training and follow-up
- ✓ Simple, low cost techniques of easy calibration and care
- ✓ Collection of credible data with an EPA-approved QAQC plan
- ✓ FIRST ALERT Data

## GWW IS NOT...

- ✗ Obligatory
- ✗ Private Consultant
- ✗ "The method"
- ✗ Activist Group







# Global Water Watch is a worldwide network of community-based watershed stewardship groups.



Philippines



Thailand



China



USA-Alabama



Brazil



Perú



Mexico



Bolivia



Argentina



Ecuador



Kenya



Washington



the  
green belt  
movement



# Kenya

## Green Belt Movement



the green belt movement

Who We Are | What We Do | Wangari Maathai | News & Events | Get Involved

### WANGARI MAATHAI

"We cannot live or give up. We need it to the present and future generations of all species to rise up and walk!"



#### Wangari Maathai

Wangari Maathai (1940-2011) was the founder of the Green Belt Movement and the 2004 Nobel Peace Prize Laureate. She authored four books: *The Green Belt Movement*, *Unbowed: A Woman, The Challenges to Africa and Regenerating the Earth*. As well as having been featured in a number of books, she and the Green Belt Movement were the subject of a documentary film: *Taking Root: The Story of Wangari Maathai* (Pearlman Productions, 2008).

Biography  
The Nobel Peace Prize  
Key Speeches & Articles  
Books



# Bacteriological Monitoring Workshop









# GWW Impacts

- Community-Based, Science-Based Projects and Programs
- Empowering locals, "I am the Scientist!"
- Local collection and ownership of data
- Linking Public Health and Watershed Health
- Data-to-Action Strategies
- Documented Impacts of Land Use Change
- Mobilization of Women and Youth
- Monitoring, Development, Livelihoods



# Monitorea el Agua

Sea cuatro pasos para implementar un programa de monitoreo comunitario del agua  
**Organízate - Capacítate - Investiga - Actúa**



Con el monitoreo del agua, logramos obtener información técnica y confiable, para conocer el estado del agua y proponer acciones concretas para prevenir, mitigar o remediar los impactos negativos, desde la perspectiva local.  
**Tod@s podemos pasar, de la intención a la acción**

CAFSO

WATER

Programa de monitoreo comunitario del agua

## GWW Impacts



# Monitorea el agua

Oxígeno disuelto, pH, temperatura, turbiedad, dureza, nitratos, bacterias



**Si yo puedo, TODOS PODEMOS**

Con el monitoreo comunitario del agua, logramos obtener información técnica y confiable, para conocer el estado del agua y proponer acciones concretas para prevenir, mitigar o remediar los impactos negativos.





# A Practical Model for Global Watershed Stewardship





Part 3  
Practical Model  
Sustainability  
People + Technology,  
Institutions,  
and Credible Data  
and Quality of Life



# GWW Challenges

- Solid partnerships
- Appropriate Strategies
- Mutualism
- Relevant Feedback with the Community
- Long-term investment
- Maintaining Data Quality and Accessibility
- Accessibility of Monitoring Supplies
- Acceptance of Community Approaches and Data



## **...nonetheless we have learned some lessons:**

► The challenges of protecting and restoring water resources, locally and worldwide, are impossible to solve solely through professional research and regulation.

► Community involvement through standardized water monitoring and mutual learning is effective in mobilizing thousands of people from numerous stakeholder groups, and should be a component of any

# Questions, comments ?



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