Wisconsin / Nicaragua Partnership for Lake Nicaragua

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Wisconsin Lakes Partnership

PARTNERS *of the* AMERICAS
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FROM THE AMERICAN PEOPLE

FARMER-TO-FARMER

UNIVERSITY OF WISCONSIN STEVENS POINT

Wisconsin Lakes Partnership

UW Extension

WISCONSIN / NICARAGUA
PARTNERS *of the* AMERICAS

earth partnership
FOR SCHOOLS

Wisconsin Lakes Partnership

Since its genesis in the early 1970s, the Wisconsin Lakes Partnership has become a national model of a true partnership. Three groups form the core of this unique team:

Wisconsin Department of Natural Resources

Provides technical and financial assistance and regulatory authority

University of Wisconsin-Extension Lakes

Designs and delivers educational materials and community outreach

Wisconsin Lakes

Advocates for local lake people and organizations at the state level

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WISCONSIN DEPT. OF NATURAL RESOURCES

UW Extension

Educator Resources

International Activities Resource Center

Posted on October 9, 2013 by marianne.krause

Welcome to the University of Wisconsin – Extension
Cooperative Extension International Activities Resource Center

When people from different cultures and countries get together for social, educational and research purposes, the participants benefit and the world becomes a better place.

We intend to serve as a catalyst providing information, incentives and networking opportunities promoting international activities and understanding.

40 UWEX faculty/staff have worked overseas in the past 5 years. There are many international scholarship opportunities for county, area and state educators. We need to develop networks, identify skills or knowledge that can be taught, and competencies needed to succeed.

There are also many benefits to educators that make them a better extension educator that strengthens our entire organization such as: new skills and new knowledge of processes, policies, content, techniques. Internationalizing Extension

Mission

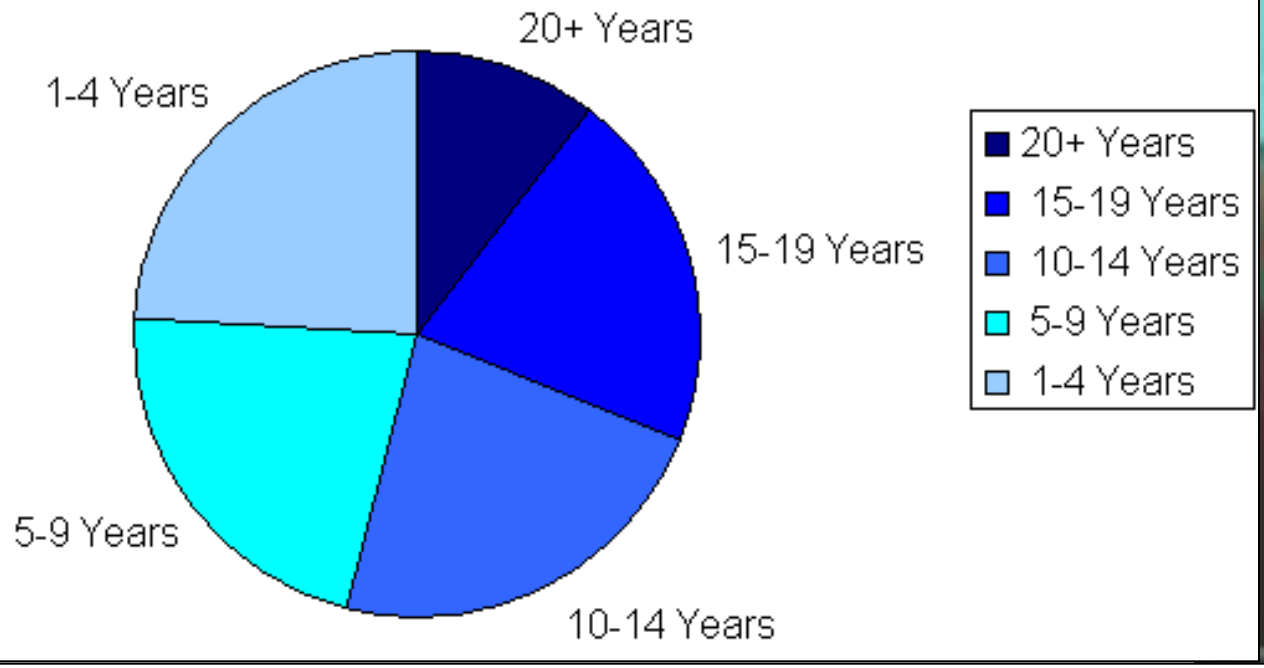
The purpose of UWEX Cooperative Extension international efforts is to contribute to the improvement of Wisconsin and international communities through the sharing of expertise and experiences.

Links

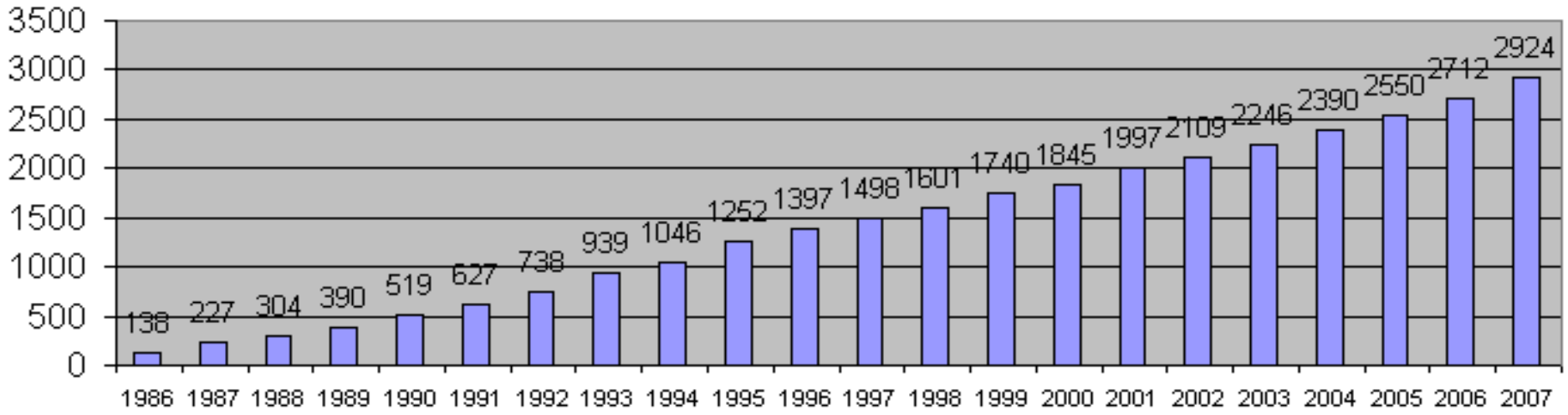
Perspectives on International Extension Work from Michigan State University

Administration

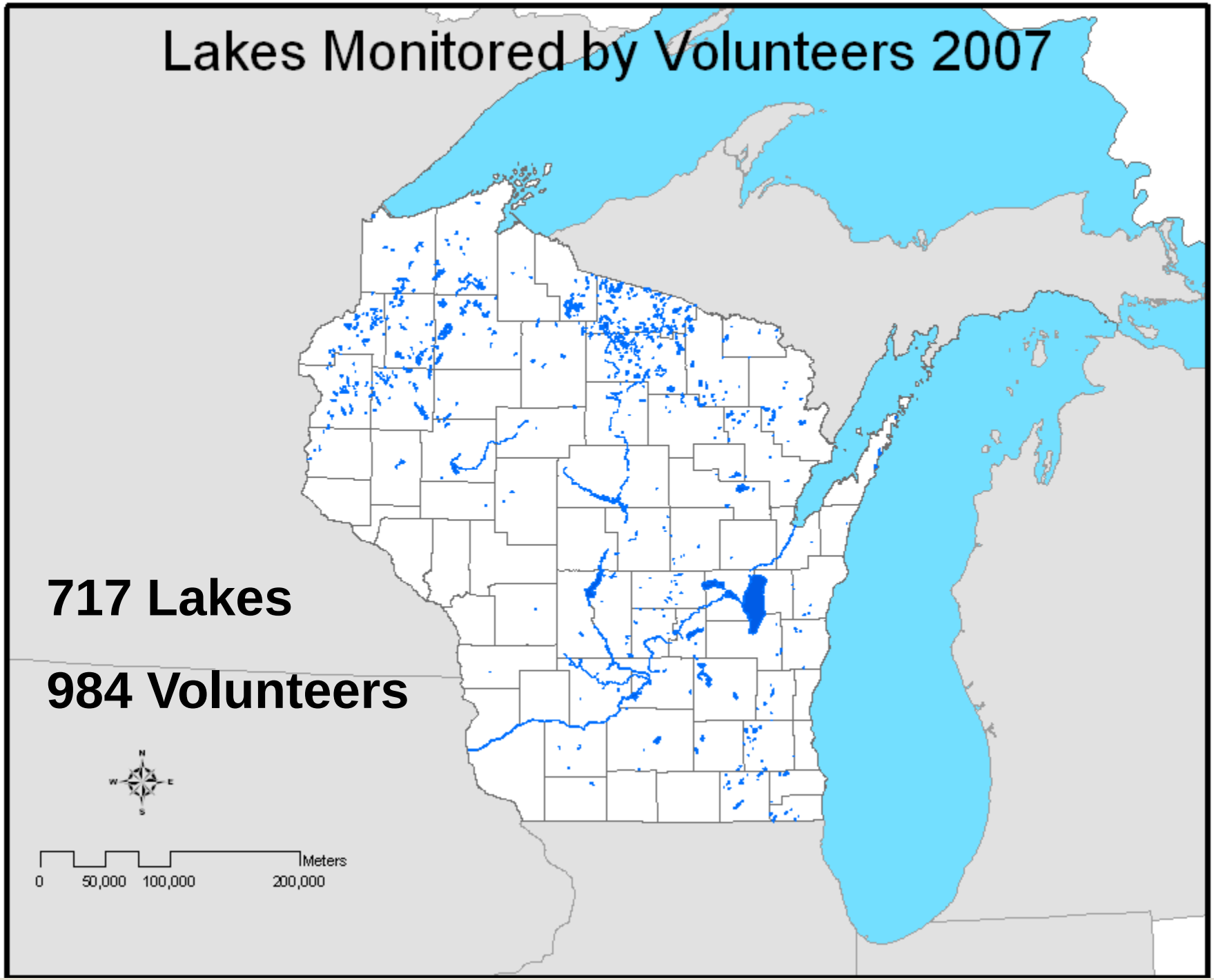
Lake Data Record Length



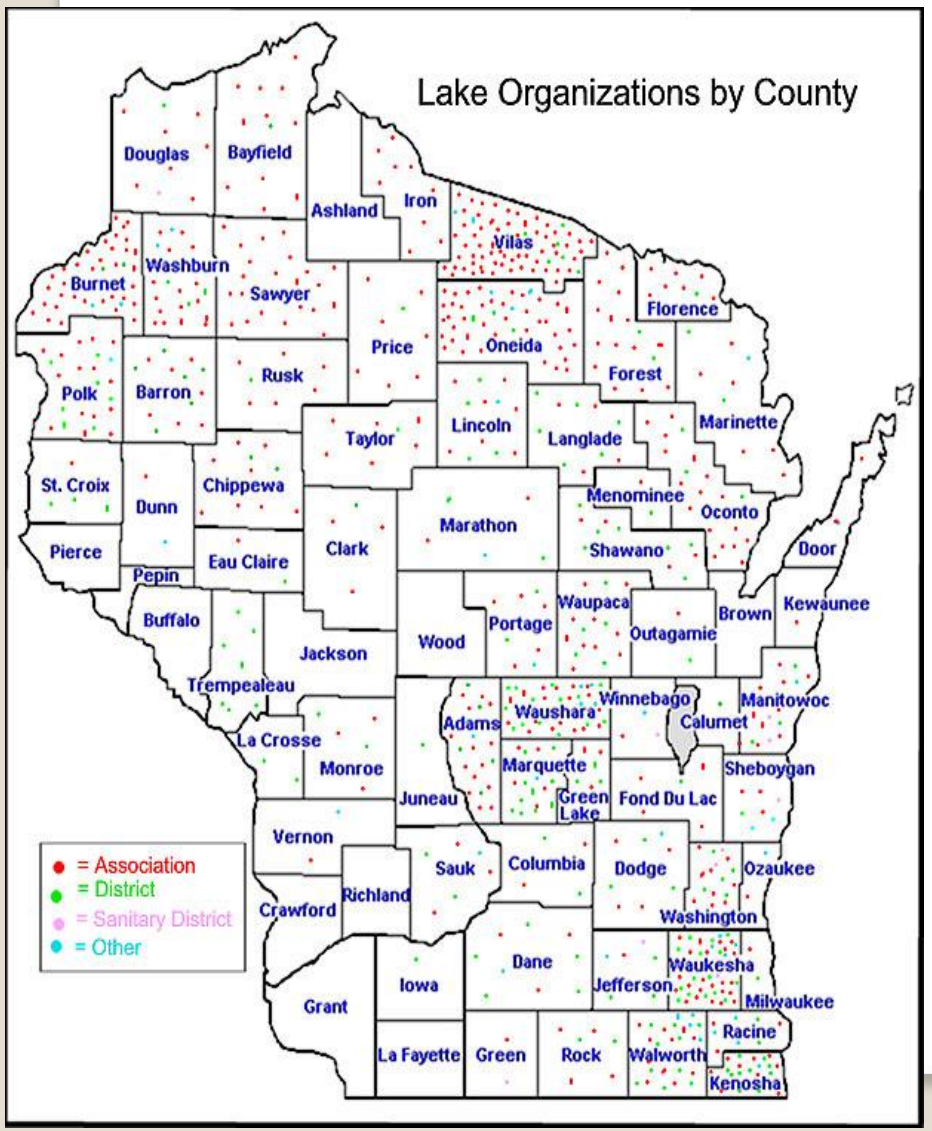
Cumulative Volunteer Participation



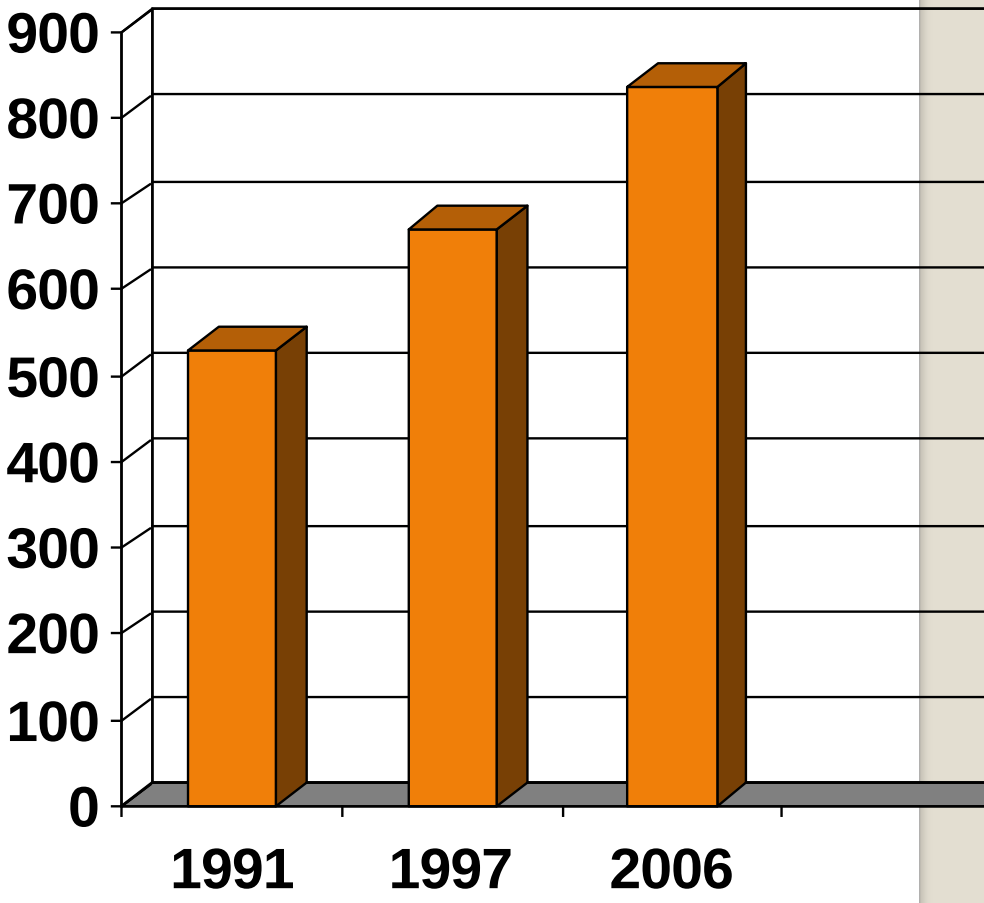
Lakes Monitored by Volunteers 2007



Building Partnerships…



Lake Organizations



Managua

FUPADE office, Managua


MADRIZ
ESTELÍ
CHINANDEGA
LEÓN
MATAGALPA
BOACO
MANAGUA
MASAYA
GRANADA
CARAZO
RIVAS
CHONTALES
REGIÓN AUTÓNOMA ATLÁNTICO SUR (R.A.A.S)
RÍO SAN JUAN
OCÉANO PACÍFICO
LAGO DE NICARAGUA
ISLA ZAPATERA
ISLA DE OMETEPE
ARCHIPIELAGO DE SOLENTINAME
COSTA RICA
GREYTOWN (San Juan de Nicaragua)
MANAGUA Y VECINDAD
Escala 1 : 300 000

Logic model (aka road map): Lake Nicaragua water quality monitoring and conservation program / partnership: a long-term community and government commitment

Situation: Lake Nicaragua is in need of water quality improvements, habitat restoration and protection, and more community involvement in its long-term water conservation and governance.

INPUTS	OUTPUTS		OUTCOMES - AFFECTS		
	Activities	Participation	Short	Medium	Long-term
What we invest? Those involved with the project: 1. Foundation for Human Development (FUPADE) and the University of Wisconsin-Stevens Point (University of Wisconsin-Extension Lakes, Wisconsin Lakes Partnership): -Coordinate and promote an initiative that establishes citizen led water quality monitoring and a Participatory Environmental Observatory for Lake Nicaragua. 2. Institutional partners: -National Water Authority (ANA) -Ministry of Environment and Natural Resources (MARENA) -INETER -MINSA 3. Municipal partners and local citizens of pilot areas: -Local divisions of political administration—32 municipalities. 4. Technical and scientific partners: -Professionals and specialists. -Universities. -Research Centers. 5. Municipal partners and local citizens of pilot areas: -Wisconsin / Nicaragua Partners of the Americas, Incorporated -Wisconsin Lakes Partnership / University of Wisconsin-Extension Lakes -USAID -Research Center for Inland Waters of Nicaragua	**What we do?** 1. Organization -Establish an institutional committee for guiding and monitoring the long-term program development (MARENO; MINSA; INETER; and ENACAL). -Create committees (working teams) within the sub-basins of the Lake Nicaragua pilot areas (I.e., mayors; NGO's; producer organizations and cooperatives; community organizations; etc.). -Cooperative agreements between institutional partners are developed and signed that outline commitments and responsibilities each will take in the long-term implementation of a lake monitoring program. -Establish agreements and commitments between technical and scientific partners (I.e., NGO's; universities; individual experts; etc.). 2. Establish the conceptual framework for the lake monitoring program -Develop the first draft program concept and content (vision; mission; objectives; organization; projected outcomes, outputs, and actions; indicators, means of verification, and goals). 3. Establish pilot water quality monitoring stations -Define sub basins and monitoring pilot areas. -Establish protocols for research and monitoring of the integrated management system of the lake hydrological resources (quality and quantity; aquatic biodiversity; water use and exploitation; vulnerability and land use). -Define monitoring protocols (variables; methods; equipment and indicators). 4. Define the participatory lake monitoring model -Nicaragua adapts the model of the Wisconsin Lakes Partnership Citizen Lake Monitoring Network (CLMN). -Design training for the local participatory (water quality and biological indicators (aquatic resources of plants and animals). -Design awareness and education program. -Design exhibition center and environmental implementation of Lake Nicaragua (Granada). -Develop official training curriculum. -Build new relationships and connections with universities and research centers in the U.S. and other countries that contribute to water conservation efforts in the long-term national water conservation effort in Nicaragua. 5. Establish three pilot water quality monitoring stations on Lake Nicaragua -Watershed committees get officially organized and functional and operational in their structure. - An education and awareness program underscores the importance of environmental functions and socio-economic values of the lake ecosystems. -A monitoring agreement b/w ANA-BASIN-FUPADE in each pilot area is made. -Socialize the monitoring program. -Develop the train-the-trainer model for the pilot sites. -Procure needed equipment and materials. 6. Develop the proposed monitoring program in a sustainable manner -Establish institutional sustainability for this initiative. -Achieve effective public participation in the program and gain the commitment of participants to a long-term, sustainable adoption of participatory water quality monitoring program work at the three pilot stations.	**Who are reached?** -Nicaraguan citizens interested in learning more about the environment, conservation of water resources and management of the lake. -Natural resource agency and university professionals work together with citizens in water quality data collection and analysis. -Formal and informal educators. -Program supporters interested in clean drinking water, safe swimming, and sustainable water quantities for business and agriculture, and healthy fisheries for Lake Nicaragua—fisherman, students, community leaders, local government, and other lake lovers interested in long-term sustainable use of water resources. -Local teachers and students interested in assisting with water quality monitoring and the study of lake aquatic ecosystems. -Eco tourists interested in learning about lake ecology, water conservation, and the wonderful environment of Lake Nicaragua.	**Short term results are:** Establish and launch three pilot water quality monitoring stations for Lake Nicaragua in the sub basins of Cardenas, Granada, and Mayales. Investigate the possibility of finding used microscopes and other scientific equipment from not-for-profit groups—(ex. Seeding Labs). Initiate an international lakes session at the 2014 Wisconsin Lakes Partnership Convention in Stevens Point, Wisconsin, U.S.A. on the University of Wisconsin-Stevens point campus. Develop and obtain a list of basic equipment for each of the three pilot water quality monitoring stations including metrological and hydrological instruments, boats and outboard motors, and other basic monitoring equipment. Create a teacher training-the-trainer program for water quality monitors and the use of bioindicators for Lake Nicaragua modeled after the Wisconsin Lakes Partnership Citizen Lake Monitoring Network. A small newsletter on Lake Nicaragua water conservation and habitat protection for electronic distribution through popular social networks is developed. Tell the story of aquatic invasive species affecting Lake Nicaragua ecosystem. Infrastructure is put into place and basic equipment is procured for a monitoring and operations center for Lake Nicaragua in Granada.	**Medium term results are:** Environmental education and training in water conservation and the sustainable use of natural resources is effectively focused around sub basins within the Lake Nicaragua watershed. Strengthen information systems throughout the watershed that provide mechanisms for the collection and dissemination of data relevant to the needs of decision-making for the integrated management of Lake Nicaragua. Explore the establishment of an annual meeting in conjunction with the national Easter holiday that brings together water quality monitoring citizen volunteers with other lake champions via an event like a lake fair or conference. Identify and empower points of contact as local water quality monitoring coordinators within the 32 municipalities that make up the Lake Nicaragua watershed. Create and disseminate information and education programs that highlight the main threats to water quality in Lake Nicaragua: the aquaculture farming of invasive tilapia; toxics from opencast mining, aerial fertilizing, fumigating; and urban wastewater. Other threats include sedimentation from logging, road construction, and makeshift settlements in urban areas. Pollution and emissions are controlled for Lake Nicaragua watershed surface waters and aquifers / groundwater.	**Long-term results are:** *Programmatic influence* -A successful model for water quality monitoring is created, sustained, and grown over time. -Graduate from basic Secchi and temperature monitoring to broader lake monitoring parameters of dissolved oxygen; chemistry; aquatic invasive species; wildlife; etc. -Opportunities for local teachers and students to join in with Lake Nicaragua water quality monitoring work are utilized. -Program evaluations illustrate gains in citizen participation and confidence at obtaining water conservation goals for Lake Nicaragua. -Citizens are more concerned about water and habitat conservation and they are proactively protecting aquatic resources. *Natural resource affects* -Sustainable drinking water, swimmable lake conditions, a healthy fishery, and sufficient water quantity -Environmental education materials are developed around ecotourism, water and habitat conservation, and lake biology. *Local citizenship and water governance* -A water ethic tied to sustainable land and water use is adopted by Nicaraguans. -There are opportunities for local citizens to gain leadership training and support for water conservation community action. *Government institutions* -Local divisions of administration and national government departments work together for long-term care of Lake Nicaragua; they incorporate water quality and habitat protection goals into their local planning efforts. -Institutional arrangements and relationships are durable between local, national, and bi-national levels.