

Thirteenth Asia - Pacific Seminar on Climate Change September 2 - 5, 2003

U.S. Capacity Building Initiatives to meet
Global Change Challenges
Dr. Toral Patel-Weynand

Highlights include:

- International Research Cooperation
- Vulnerability and Adaptation Initiatives
- Targeted and general technical support initiatives
- National Communications Related Initiatives

U.S. Efforts

- 1.7 billion annually on focussed climate change research Programs
- 1997 - 2000, U.S. direct, bilateral, and regional assistance for climate change mitigation, adaptation, and crosscutting activities totaled \$4.1 billion
- Between 1997 and 2000, the U.S. appropriated \$285.8 million to the GEF
- In 2003, the U.S. appropriated \$146.9 million to the GEF

International Research Cooperation

- One overarching goal: Support scientific capabilities and the application of results to promote the fullest possible participation by scientists and scientific institutions in research, observational, and data management efforts.
- CCSP Network of Key Organizations:
- International Geosphere-Biosphere Programme (IGBP); International Human Dimensions Programme (IHDP), World Climate Research Programme (WCRP), Diversitas, Earth Science System Partnership (ESS-P), APN, IAI and others

System for Analysis Research and Training (START)

- Sponsored jointly by: IGBP, WCRP, IHDP and Diversitas
- Partners: largely supported by CCSP, USAID, EPA
- Undertaking capacity building on a regional basis in Africa, Southeast Asia, temperate East Asia, the Mediterranean and Oceania
- Goal: To build capacity in developing countries so they can conduct research on global change, be better prepared to understand and mitigate potential impacts on human health, agriculture, natural resources, water and food security

The Inter-American Institute for Global Change Research and University of Miami

Summer Institutes on Interdisciplinary Science in the Americas, 1999-2003

FY 1990-2001 \$300K in the first 3 Summer Institutes; 300K for the next 3 years

- Vulnerability Associated with Climate Variability and Climate Change in Central America and the Caribbean (Oct.26-Nov. 8, 2003, Santo Domingo, Dominican Republic)
- Land Use and Cover Change in the Amazonian Region: Patterns, Processes and (Plausible Scenarios) (Oct. 12-24, 2003, Cachoeira Paulista, Brazil)
- Global Warming and Global Climate Changes: Causes and Mitigation Alternatives (Nov. 10-22, 2003, Piracicaba, Brazil)

IAI Approach: Strong Policy Relevance (themes, regions, sectors);
Strong Science-Policy & Capacity Building in Decision-Making
(science base looking at policy application)

Participants: 20-22 each year from 17 IAI countries Duration: 3
Weeks

U.S. NOAA International Climate Cooperation

- Environment, Science and Development Program
- Economics and Human Dimensions Program
- Regional Integrated Sciences and Assessments Program (RISA)
- Climate Observation Program

Vulnerability and Adaptation Initiatives

- USAID Climate Change Initiative
- Famine Early Warning (FEWS Net)
- Examples of Specific Country and Regional Initiatives

USAID Climate Change Initiative

- \$ 1 Billion from 1998 to 2002
- \$ 155 Million in 2003
- Works in Over Forty Countries
- Objectives:
 - Support developing country participation in the UN Framework Convention on Climate Change
 - Decrease net greenhouse gas emissions from energy and land use/forestry sector
 - Decrease developing country vulnerability

Famine Early Warning (FEWS Net)

- \$ 6 million (FY02) and \$6 million (FY03)
- **Partners:** NOAA, NASA, USAID
- **Start Date:** 2000
- **Purpose:** To provide decision-makers with the information to effectively respond to drought and food insecurity. FEWS NET analyzes remote sensing data and ground-based meteorological, crop, and range-land observations to track progress of rainy seasons in semi-arid regions of Africa to identify early indications of potential famine.

Specific Examples

- Drought Monitoring Center-Nairobi (DMCN)
- Drought Monitoring Center (DMCH) - Harare, and Regional Remote Sensing Unit (RRSU)
- Climate Monitoring/Information Dissemination
- Climate Forecast Applications for Disaster Mitigation in Asia
- Climate Forecasting and Applications for Bangladesh

Specific Examples

- Development of a Flood Early-Warning System in Vietnam
- Development of a Coastal Storm Early-Warning System in Vietnam
- Trans-Boundary River Forum
- Community-Based Disaster Preparedness in South Asia
- Adaptive Strategies for Drought Mitigation in South Asia
- Development of Flood-Forecasting in the Mekong River Basin

U.S. Climate Technology Partnership

- Supports implementation of EE and RE technologies
- Cooperating countries: Brazil, China, Egypt, Republic of Korea, Mexico, Philippines, and South Africa
- Activities:
 - Technology assessment
 - Barrier analysis
 - Strategy development
 - Technical support and training
- US-CTC Gateway
 - Provides information on U.S. technology transfer programs, resources, and useful tools

Targeted Technical Support: Example 1

- USAID/USEPA/NASA GHG Inventory Support for Central America
- \$1.2 Million from 2003 to 2005 (planned)
- All countries of Central America
- Activities (proposed):
 - Support for in-country inventory experts
 - Development of national GHG inventory systems
 - Collection and analysis of satellite land-cover data
 - Adaptation of EPA's landfill gas model to local circumstances
 - Improvement of agricultural soil carbon stock estimate

Targeted Technical Support: Example 2

- USEPA Integrated Environmental Strategies (IES)
- \$ 1.1 Million from 2003 to 2005
- Cooperating countries: Argentina, Brazil, Chile, China, India, Republic of Korea, Mexico, Philippines
- Activities:
 - Prepare emissions inventories
 - Develop clean energy technology scenarios
 - Analyze costs and benefits (e.g., emission reductions, air quality, health and economic impacts)
 - Promote public outreach and implementation of promising measures

General Technical Support

- IPCC GHG Inventory Support
 - Translation of Good Practice Guidance (GPG) from English into other official U.N. languages (\$1.6 million)
 - Supporting elaboration and updating of GPG methods for LULUCF
 - Supporting the collection of updated emission factors in Africa and South America (Emission Factor Database)
 - Participating in the technical review of submitted emission factors

USAID Support for National Communications: GHG Inventories

- Latin America/Caribbean:
 - Worked with local groups in Mexico to consolidate methodologies for estimating GHG reductions
 - Trained local partners in Central America to determine emissions in the energy sector through modeling
- Asia/Near East
 - Supported Philippines Climate Change Observation Center to develop national GHG emissions inventory
- Africa
 - Developed technical study to measure South Africa's GHG sources for mitigation strategy

USAID Support for National Communications: Vulnerability and Adaptation Analysis

■ Panama

- Canal watershed program reduces vulnerability to the water supply for the watershed

■ Honduras

- Risk assessment for municipal governments and water management organizations

■ Guinea

- Improved land use practices and policies

Conclusions

- Productive to consider CC capacity building broadly. Many different kinds of activities contribute to capacity building to meet mutual goals of UNFCCC
- Bilateral donor activities play a key role in meeting capacity building needs
- Country driven priorities, once set, are an effective way to meet targeted capacity building needs
- Capacity building fosters an enabling environment that facilitates the transfer of information, methodologies and technologies between countries and these are key to meeting global challenges

Conclusions

- National Communications:
- Many types of capacity building activities directly and indirectly support developing countries' national communications.
- U.S. is committed to providing assistance so that all Parties can fulfill their reporting obligations.
- Many developing countries have a good foundation, but recognize that more needs to be done.
- U.S. to work with international organizations and other donor countries to address identified gaps and needs.

Specific Vulnerability and Adaptation Initiatives

Drought Monitoring Center- Nairobi (DMCN)

- \$900k (FY02) and \$651k (FY03)
- **Partners:** NOAA, USAID, WMO, IRI
- **Start Date:** July 2002
- **Purpose:** To improve climate monitoring, prediction and applications, and early warning of climate related disasters in support of regional disaster preparedness and other sustainable development objectives in Greater Horn of Africa (GHA).

Drought Monitoring Center (DMCH) - Harare, and Regional Remote Sensing Unit (RRSU)

- \$450k (FY02) and \$651k (FY03)
- **Partners:** NOAA, IRI, WMO, Southern African Development Community (SADC)
- **Start Date:** FY02 (grant agreement in process)
- **Purpose:** To improve multi-sector, short- and long-term climate risk management and emergency response to climate variability throughout the Southern Africa region. The focus is to strengthen long-term regional capacity to understand, monitor, predict, plan for and respond to hydro-climatic impacts in sensitive sectors and provide timely operational climate information to better manage risks and potential climate shocks under current regional conditions of elevated disaster risk.

Climate Monitoring/Information Dissemination

- \$950k (FY02) and \$950k (FY03)
- **Partners:** NOAA
- **Start Date:** 1997
- **Purpose:** To mitigate drought, flood and severe storm disasters through geographically targeted climate-forecasting applications in combination with other climate and sector-specific information such as observations and historical perspectives.

Climate Forecast Applications for Disaster Mitigation in Asia

- \$700k in FY03
- **Partners:** USAID, Relevant government agencies, NGOs, academicians, emergency response and management entities, community groups
- **Start Date:** October 2001 with up to a five-year duration
- **Purpose:** To mitigate hydro-meteorological disaster through climate forecast applications in vulnerable countries in Asia.

Climate Forecasting and Applications for Bangladesh

- \$458k (FY02) and \$308k (FY03)
- **Partners:** NOAA/OGP, Asian Disaster Preparedness Center (Bangkok), International Research Group for Climate Prediction (IRI), European Center for Medium Range Weather Forecasts.
- **Start Date:** 9/26/00-9/25/03
- **Purpose:** To develop a comprehensive flood-forecasting technology for Bangladesh, then to utilize the forecasts for relevant applications.

Development of a Flood Early-Warning System in Vietnam

- \$ 280k (FY02) and \$250k (FY03)
- **Partners:** USAID, UNDP
- **Start Date:** 6/00-6/04
- **Purpose:** to develop a flood early-warning system in seven flood-prone provinces of central Vietnam.

Development of a Coastal Storm Early-Warning System in Vietnam

- \$ 480k (FY02) and \$500k (FY03)
- **Partners:** USAID, UNDP
- **Start Date:** 5/01-5/04.
- **Purpose:** to implement a radio-and pager-based storm early-warning system for fishing boats at sea in all 25 coastal provinces in Vietnam.

Trans-Boundary River Forum

- \$100k (FY02) and \$100k (FY03)
- **Partners:** International Center for Integrated Mountain Development, NOAA and USGS
- **Purpose:** To support a regional forum to share forecasting and flood-related information. This forum brings together decision-makers and technical personnel from countries in South Asia to share information related to flood disasters in the region, and broader trans-boundary water issues.

Community-Based Disaster Preparedness in South Asia

- \$500k (FY03)
- Partners: USAID
- Start Date: October 2002
- Purpose: To offer funding for flood-related community preparedness programs in flood-prone districts in South Asia.

Adaptive Strategies for Drought Mitigation in South Asia

- \$50k (FY03)
- **Partners:** USAID India Mission
- **Start Date:** TBD
- **Purpose:** (Proposed) To convene a forum to discuss drought-mitigation activities and to coordinate a regional response.

Development of Flood-Forecasting in the Mekong River Basin

- \$75k (FY02) and \$75k (FY03)
- **Partners:** NOAA , USGS, USAID
- **Purpose:** To provide technical assistance to enhance flood prediction and dissemination capacity.