

U.S. Support for Country Studies to Address Climate Change

6 September 1994

I enclose the first issue of the U.S. Country Studies Program newsletter, *Country Study Notes* for your information. *Country Study Notes* is a quarterly publication of the U.S. Country Studies Management Team (CSMT) that contains current news on Country Studies Program activities, details about recent and upcoming workshops, and information on resources that are available through the CSMT. We welcome comments or contributions to the newsletter.

A revised program brochure is also enclosed for your review. The brochure summarizes current scope, participants and activities of the U.S. Country Studies Program.

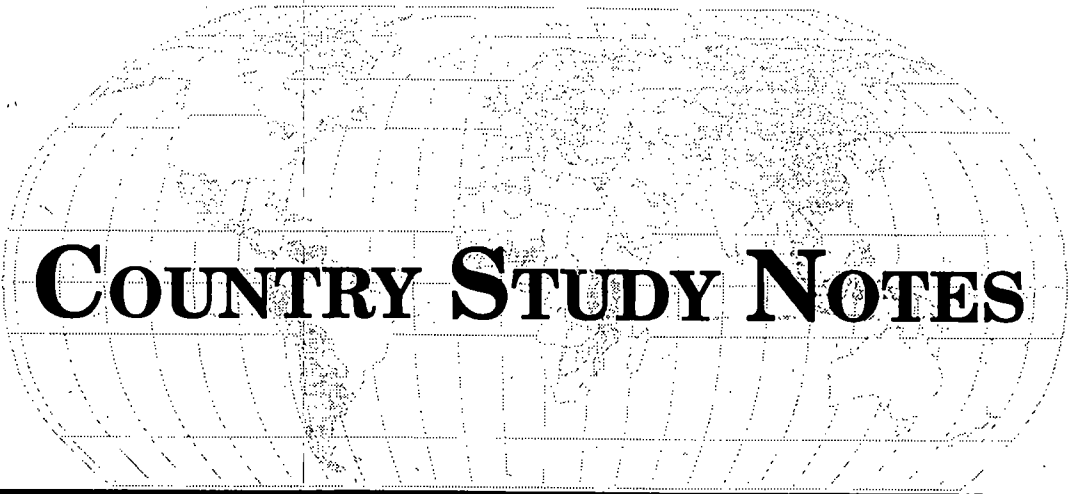
If you have any questions or comments about the Country Studies Program, or if you would like more information, please feel free to contact me at 1-202-426-0011 or by E-mail at: csmt@igc.apc.org.

Sincerely,

Robert K. Dixon, Ph.D.
Director

Enclosures (2)

Issue 1
August
1994



COUNTRY STUDY NOTES

U.S. Country Studies Program: Support for Climate Change Studies

Overview of the U.S. Country Studies Program

The U.S. Country Studies Program is an interagency program developed as a part of the U.S. Government's commitment to the United Nations Framework Convention on Climate Change (FCCC). Under the program, the U.S. provides technical and financial support for climate change studies by developing countries and countries with economies in transition. The studies assist countries in meeting their national assessment needs and are a first step for countries seeking to meet their reporting obligations under the FCCC.

The program aims to enhance countries' capabilities to inventory net emissions of greenhouse gases (GHG), assess their vulnerability to climate change, and evaluate the options for mitigating and adapting to climate change. It supports countries' efforts to establish a process for developing and implementing national mitigation and adaptation policies. The studies will also develop data and information that can be used at national, regional and global levels to assess current and future trends in net anthropogenic emissions of greenhouse gases and to advance national and international discussions of climate change.

The U.S. provides countries with active technical assistance by preparing and distributing guidance materials and analytical tools (e.g., models and databases), conducting training workshops and site visits of U.S. experts, and providing support for regional workshops. The Country Studies

Management Team (CSMT), which comprises full- and part-time personnel drawn from EPA, DOE, AID, USDA, NOAA, and the DoS, directs program operations from the Country Studies office at the Capital Gallery, 600 Maryland Avenue, SW, Washington, D.C. If you would like more information on the program, please contact the CSMT at 1-202-426-1628. ☎

First and Second Round Country Studies

Twenty-six countries are receiving support for studies in the first round of the program. The 26 Round 1 countries are: *Algeria, Bulgaria, Central America* (regional study includes: *Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama*), *Chile, Czech Republic, Egypt, Ethiopia, Gambia, Kazakhstan, Marshall Islands, Mexico, Micronesia, Mongolia, Nigeria, Oman, Peru, Poland, Russian Federation, Venezuela, and Zimbabwe*. Most of the studies began on October 1, 1993.

Proposals from 28 countries were received for Round 2 of the program. The anticipated starting date for the Round 2 studies is October 1, 1994. Countries that will likely be supported in Round 2 are: *Argentina, Bangladesh, Bolivia, Botswana, China, Ecuador, Estonia, Fiji, Hungary, Indonesia, Ivory Coast, Kenya, Kiribati, Malawi, Mauritius, Mozambique, Nepal, Philippines, Romania, Slovak Republic, Sri Lanka, Tanzania, Thailand, Uganda, Ukraine, Uruguay, Western Samoa, and Zambia*.

PARTICIPATING U.S. AGENCIES

Environmental
Protection Agency

Department
of Energy

Agency for
International
Development

Department
of State

Department of
Agriculture

National
Aeronautics
and Space
Administration

National Oceanic
and Atmospheric
Administration

National Science
Foundation

Department of
Health and
Human Services

Department
of the Interior

Smithsonian
Institution

To be eligible for participation in the Country Studies Program, a country must be a signatory to the FCCC, be willing to share and adopt study results internationally, establish interministerial committees to coordinate studies, and coordinate activities with other donors. Candidate countries must meet the eligibility requirements and submit proposals for climate change country studies. The proposals are subject to programmatic and technical peer review by policy and science experts drawn from academic, government, and nongovernment organizations, and by the Inter-agency Coordinating Council, which provides broad policy guidance to the CSMT. Armenia, Brazil, Eritrea, Georgia, Guyana, India, Latvia, Lesotho, Seychelles, Sierra Leone, Togo, and Uzbekistan expressed interest in support for a possible third round of studies.

CSMT Guidance Documents

Ron Benioff, CSMT (202-426-1635)

Chris Bordeaux, CSMT (202-426-1637)

The CSMT and Argonne National Laboratory (ANL) completed a draft guidance document on methods for conducting vulnerability and adaptation assessments. This document complements the IPCC guidelines by providing a step-wise discussion of methods suitable for developing and transition countries. Version 1.0 of the document addresses methods for the preparation of climate and nonclimate scenarios, vulnerability assessment methods for crops, grasslands/livestock, forests, water resources, and coastal resources, and methods for the evaluation of adaptation options. This material has been distributed to all Round 1 and prospective Round 2 countries. The CSMT is very interested in receiving comments on the draft version of the guidance document.

The CSMT and Lawrence Berkeley Laboratory (LBL) also recently completed a draft guidance document on mitigation analysis. More than 25 authors from universities, labs, federal agencies and other institutions contributed to this guidance handbook, which will serve as an appendix to the IPCC Mitigation Methods document. The document contains step-by-step guidance on

identifying and screening GHG mitigation options; evaluating their potential for GHG mitigation, costs, and other socioeconomic and environmental impacts; and developing national baseline and mitigation scenarios of future GHG emissions. The document focuses on both energy sectors (demand and supply) and non-energy sectors (forests, drylands, agriculture, and waste management), and provides guidance on the evaluation of mitigation options and the use of models for sectoral and integrated analysis of options. It also describes possible policies for adopting mitigation options in each sector, though it does not provide detailed guidance on implementation of these options. Version 1.0 is now available through the CSMT, and copies were distributed to Round 1 countries at the recent Mitigation Workshop in Berkeley, California. The CSMT is very interested in receiving comments on this draft document.

Preliminary Emissions Inventory Results

Jack Fitzgerald, CSMT (202-426-0194)

Several of the Round 1 countries (that is, Bulgaria, Ethiopia, Mongolia, Peru, and Venezuela) have completed their preliminary emissions inventories. The countries have successfully applied the IPCC/OECD methodology in preparing their inventories and are now refining their inventories and presenting their results. Most other Round 1 countries expect to complete their preliminary inventories in late 1994.

CSMT Provides Library Support

The CSMT has developed a functional library of technical documents, data bases, books, maps, and other items to help support development of assessments and national plans. The technical documentation is drawn from sources worldwide and focuses on the three major technical areas of country studies: GHG emissions inventories, vulnerability and adaptation assessments, and mitigation options. The library also contains material on national plans and public education. It is located at the CSMT suite of offices and dispatches technical information to scientists,

engineers, and analysts participating in the country studies program worldwide. Several hundred technical documents are dispatched quarterly, and the demand will increase as 1994 assessments are initiated.

The CSMT library is also expanding capability to retrieve information electronically. The CSMT library works with Gerry Barton, director of the Global Change Research Information Office (GCRI), to coordinate CSMT library operations with GCRI. GCRI was established in 1993 "to disseminate to foreign governments, businesses, institutions, and citizens, scientific research information on preventing, mitigating, and adapting to the effects of global climate change." The CSMT will provide cooperating countries with instructions on how to access the GCRI electronic directories for additional sources of climate change research information. The GCRI resources complement those of the CSMT library, whose main focus is technical guidance documents and policy issues.

The CSMT encourages other countries and international organizations to contribute materials and information to the library. If you have resources that you would like included in the CSMT library or if you would like a listing of available information, please contact the CSMT or mail the material directly, Attention: Library.

Recent Workshops

Vulnerability Assessment in Central America

Maricruz MaGowan, CSMT (202-426-1670)

The CSMT sponsored a workshop on Global Climate Change Vulnerability and Adaptation Assessment Methods in San Jose and Guanamar, Costa Rica, on May 16-20, 1994. Approximately forty senior policy analysts, scientists, and engineers from Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama participated in the workshop. The hands-on training focused on global climate change scenarios, and vulnerability and adaptation assessments in agriculture, water resources, and sea-level rise. Leading technical and policy experts from North, Central, and South America trained participants to

use a variety of analytical tools for assessing vulnerability to climate change. Participants in the sea-level rise section learned to use aerial-video mapping, field assessment techniques, and simulation modeling at Pacific coast sites near Guanamar, Costa Rica.

Mitigation Workshop

Chris Bordeaux, CSMT (202-426-1637)

The CSMT provided training in mitigation assessment methods at Lawrence Berkeley Laboratories in Berkeley, California, on June 13-24, 1994. More than 40 representatives from 14 countries participated in the workshop. Leading international experts from six U.S. national laboratories and academic and private institutions combined presentations on methods for evaluating mitigation options with hands-on training on contemporary analytical tools (e.g., models). The workshop also provided guidance and training on mitigation analysis methods for three main topics addressed in concurrent sessions: energy, non-energy, and macro-economic analysis. In each session, participants were provided with an overview of mitigation issues and methods, including information on the costs and benefits of mitigation options. Complementary hands-on training with selected analytical tools encouraged participants to focus on mitigation issues within their respective countries. Thirteen countries proposed to complete comprehensive mitigation assessments that will contribute to reporting needs outlined under the FCCC. Technical and policy analysts from South Korea also participated as observers.

Emissions Workshop in Africa

Sandy Guill, CSMT (202-426-1464)

The CSMT and several other organizations cosponsored an Intergovernmental Panel on Climate Change (IPCC) and United Nations Environment Programme (UNEP) emissions workshop in Nairobi, Kenya, on March 21-25, 1994, to assist national experts in Africa in the implementation and testing of proposed IPCC methods for national GHG inventories. Sixty-two experts from 37 African nations attended the workshop, which was a part of the Global Environment Facility

(GEF)-funded project on Country Cases Studies of Sources and Sinks of Greenhouse Gases. Other cosponsors were UNEP Climate Unit, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), United Nations Development Programme (UNDP) Regional Office for Africa and the Regional Bureau for Arab States, and START (System Analysis, Research and Training). The workshop encouraged cooperation and coordination among institutions and participants doing emissions studies within the region. Experts from Venezuela and the Philippines represented Latin America and the Asia-Pacific regions.

UNEP Workshop

Robert K. Dixon, CSMT (202-426-0011)

The UNEP Collaborating Centre on Energy and Environment organized the "Conference on

National Action to Mitigate Global Climate Change" in Copenhagen, Denmark, on June 6–10, 1994. Representatives from more than 60 nations attended the conference, including delegates from approximately 20 developing and transition nations that are receiving technical assistance through the U.S. Country Studies Program. The conference addressed both technical and policy dimensions of response options for developing and transition countries. Country Studies Program representatives presented reports on current national GHG emissions inventories and preliminary analyses of specific GHG mitigation options. A plenary presentation by the Czech Republic illustrated how U.S. support for climate change studies stimulated the recent development of a Czech National Climate Change Action Plan. 

Upcoming Workshops

September 26–30, 1994

Honolulu, Hawaii

Pacific Islands and Asia Vulnerability and Adaptation Workshop

October 1994

Southern Africa

Methods for Estimating GHG Emissions from Non-Point Sources in Africa

October 3–7, 1994

Chiangmai, Thailand

Cosponsor IPCC/UNEP

Emissions Inventory Workshop for Asia and the Pacific

November 14–18, 1994

Harare, Zimbabwe

African Vulnerability and Adaptation Workshop (emphasis on fisheries and wildlife)

November 14–18, 1994

Bangalore, India

Cosponsor START

Workshop on Climate Variability for South Asia

December 5–9, 1994

Nairobi, Kenya

Cosponsor ACTS/UNEP

African Conference on Global Climate Change

December 7–9, 1994

Washington, D.C.

Management and Coordination of Round 2 Country Studies

December 12–15, 1994

Washington, D.C.

Emissions Inventory Methods for Round 2 Countries

January 23–February 3, 1995

Honolulu, Hawaii

Vulnerability and Adaptation Methods for Round 2 Countries

February 1995

Margarita Is., Venezuela

Latin American Emissions Inventory Workshop (likely focus: land-use/tropical forests)

March/April 1995

Berkeley, California

Mitigation Assessment Methods for Round 2 Countries

April 1995

Central/Eastern Europe

Inventory and Mitigation Workshop for Transition Countries (likely focus: forestry and methane issues)

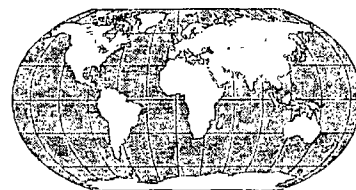
May 1995

St. Petersburg, Russia

International Conference on Adaptation Analysis Methods

The U.S. Country Studies Program is interested in cosponsoring workshops with other organizations. If you would like more information or would like to contact the CSMT regarding future workshops, please contact Ron Benioff at 202-426-1635.

*For more information on the U.S. Country Studies Program or to receive future newsletters, contact:
The U.S. Country Studies Management Team (PO-63),
1000 Independence Avenue, SW, Washington, D.C. 20585
(202) 426-1628 (phone), (202) 426-1540/1551 (fax), or email: csmt@igc.apc.org*



U.S. Country Studies Program:

Support for Climate Change Studies

Under the U.S. Country Studies Program, the Government is providing technical and financial support to help developing countries and countries with economies in transition prepare studies that address climate change. The studies will enable these countries to develop inventories of their anthropogenic emissions of greenhouse gases,

assess their vulnerabilities to climate change, and evaluate response strategies for mitigating and adapting to climate change. The U.S. Country Studies Program reaffirms the U.S. Government's commitment to the objectives and principles outlined in the *Framework Convention on Climate Change*.

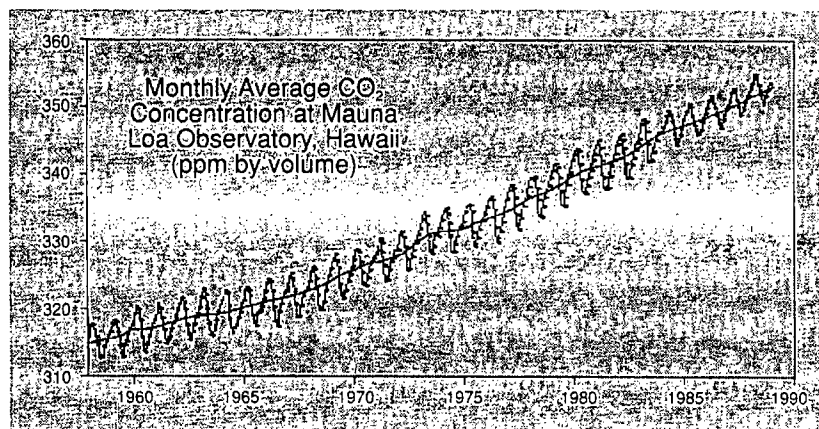
What Are the Objectives of the U.S. Country Studies Program?

The U.S. Country Studies Program provides countries with financial and technical assistance for all facets of their studies.

The program enhances the capabilities of countries and/or regions to inventory their net emissions of greenhouse gases, assess their vulnerabilities to climate change, and evaluate available options for mitigating and adapting to climate change. It also supports countries' efforts to establish a

process for developing and implementing national policies and measures to deal with climate change over time.

Moreover, the U.S. Country Studies Program generates data and information for use at the national, regional, and global levels; assesses current and future trends in net anthropogenic emissions of greenhouse gases; and furthers national and international discussions of climate change issues.



Historic CO₂ concentrations observed at Mauna Loa, Hawaii (Source: Adapted from Bolin 1986; updated through 1989 based on Monastersky 1989)

What Are the Primary Elements of the Country Studies?

Most country studies include three main elements: inventories of greenhouse gas

emissions, assessments of vulnerability to the impacts of climate change and adaptive responses, and assessments of mitigation options to reduce greenhouse gas emissions or enhance carbon sinks.

Number of Countries Working on Different Topics

Topic	Round 1 [*] Countries	Round 2 [*] Countries
Greenhouse Gas Emission Inventories	17	27
Vulnerability and Adaptation Assessments	25 [†]	26
Mitigation Assessments	17	22
National Measures and Strategies	8	15
Public Education and Outreach Assistance	7	14

^{*} Round 1 corresponds to studies initiated in 1993.

[†] Round 2 corresponds to studies initiated in 1994.

[‡] This number includes seven Central American countries working together on a regional study of vulnerability and adaptation to climate change.

Some studies also include plans for developing national measures and strategies and public education and outreach programs.

How Is Technical Assistance Provided?

Provide Guidance Materials and Analytical Tools

The U.S. Country Studies Program works in close cooperation with other countries and international organizations to design and implement technical support activities.

Emission Inventories

The U.S. Country Studies Program is distributing the Emission Inventory Guidelines (in English, Chinese, French, Russian, and Spanish) as well as a model prepared by the Intergovernmental Panel on Climate Change (IPCC) and the Organization for Economic Cooperation and Development (OECD).

Vulnerability and Adaptation Assessments

The program prepared a step-wise guidance document based on the IPCC Impact and Adaptation Assessment Guidelines.

A variety of analytical tools are provided to countries, including General Circulation Model data, impact assessment models, and adaptation frameworks (see table below).

Mitigation Assessments

The program prepared a guidance document that complements the IPCC Mitigation Methods Document. Analytical tools provided to countries include models for the energy, forestry, agriculture, and waste management sectors, as well as macroeconomic models (see table below right).

Sponsor Technical Workshops

Workshops are designed to provide training on technical methods and to promote information exchange among countries and the dissemination of results. In 1993, more than 100 individuals from the 20 countries conducting studies in Round 1 of the program participated in three major training workshops. The workshops provided hands-on guidance for conducting greenhouse gas emission inventories, analyzing vulnerability to climate change and adaptation

response options, and evaluating mitigation response options.

Also in the first year of the program, regional workshops cosponsored with the United Nations Environmental Programme (UNEP), IPCC, OECD, the Global Environment Facility (GEF), and other organizations were implemented in Africa, Asia, Latin America, and the Pacific Islands. These workshops provided training on technical

(cont.)

Examples of Analytical Tools for Vulnerability and Adaptation Assessments

Climate Scenarios	Recent output from six general circulation models (CCC, GISS, GFDL, HCM, NCAR, UKMO)
Coastal Impacts	Aerial videotape-assisted coastal vulnerability assessment techniques
Crop Impacts	Crop growth models (DSSAT)
Grassland/Livestock Impacts	Integrated grassland and livestock production model (SPUR2)
Forest Impacts	Forest gap and Holdridge vegetation models
Water Impacts	Water balance and runoff models (CLIRUN)
Adaptation	Framework for adaptation assessment, including menus of adaptation options and adaptation decision models

methods and addressed climate change topics of common concern to countries in the region.

Many more workshops are planned for the program's second year (see page 6). The U.S. Country Studies Program is cosponsoring future

workshops in conjunction with UNEP, UNDP (United Nations Development Programme), GEF, IPCC, IGBP (International Geosphere-Biosphere Programme), Germany, and other donor countries and organizations.

Support Site Visits and Provide Guidance from Technical Experts

Teams of technical experts assist countries as they conduct their emission inventories, vulnerability and adaptation assessments, mitigation

assessments, and other analyses. The experts conduct site visits, provide advice on methods, and review data and reports.

Host Analysts from Other Countries

Round 1 (1993) and Round 2 (1994) countries were invited to send analysts to Washington, D.C., to work with the Country Studies Management Team on three- to six-month assignments. The analysts will help

design and implement technical assistance activities, including regional initiatives. The program will share costs with host countries. Up to five analysts will be sponsored for assignments starting in late 1994.

Assist in Other Activities

Countries receive assistance in developing national measures and strategies and public education and outreach activities. The U.S. Country Studies

Program also operates a resource center that distributes climate change documents to more than 60 countries.

Examples of Analytical Tools for Mitigation Assessments

Energy Demand and Supply

Industrial	<i>Long-Term Industrial Energy Forecasting Model (LIEF)</i>
Residential/Commercial	<i>Building analysis models</i>
Transportation	<i>Vehicle stock model</i>
Agriculture	<i>Static and dynamic simulation models</i>
Renewable Energy	<i>Analytical Hierarchy Process (AHP)</i>
Conventional Energy	<i>See integration models</i>
Integration	<i>Various energy models (e.g., ENPER, ETO, LEAP, MARKAL, STAIR)</i>

Nonenergy Sectors

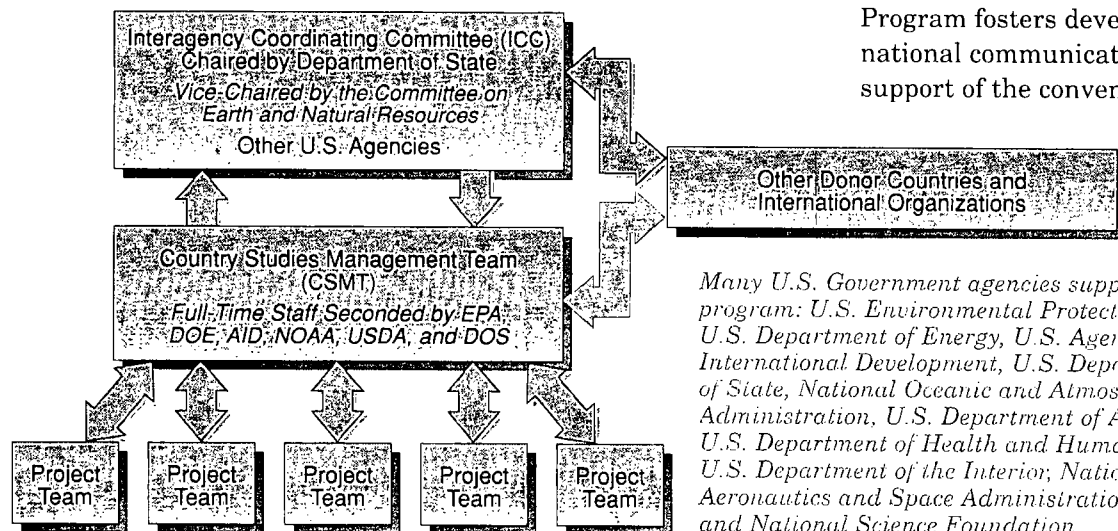
Land Use	<i>Land Use and Carbon Sequestration Model (LUCS)</i>
Forestry and Biomass	<i>COPATH / COMAP models</i>
Agriculture	<i>Static and dynamic simulation models</i>
Rangelands	<i>State transition model</i>
Waste Management	<i>Recycling model</i>

Macroeconomic Analysis

Various models (e.g., ETA-MACRO, LBL, MARKAL-MACRO, MIMEC)

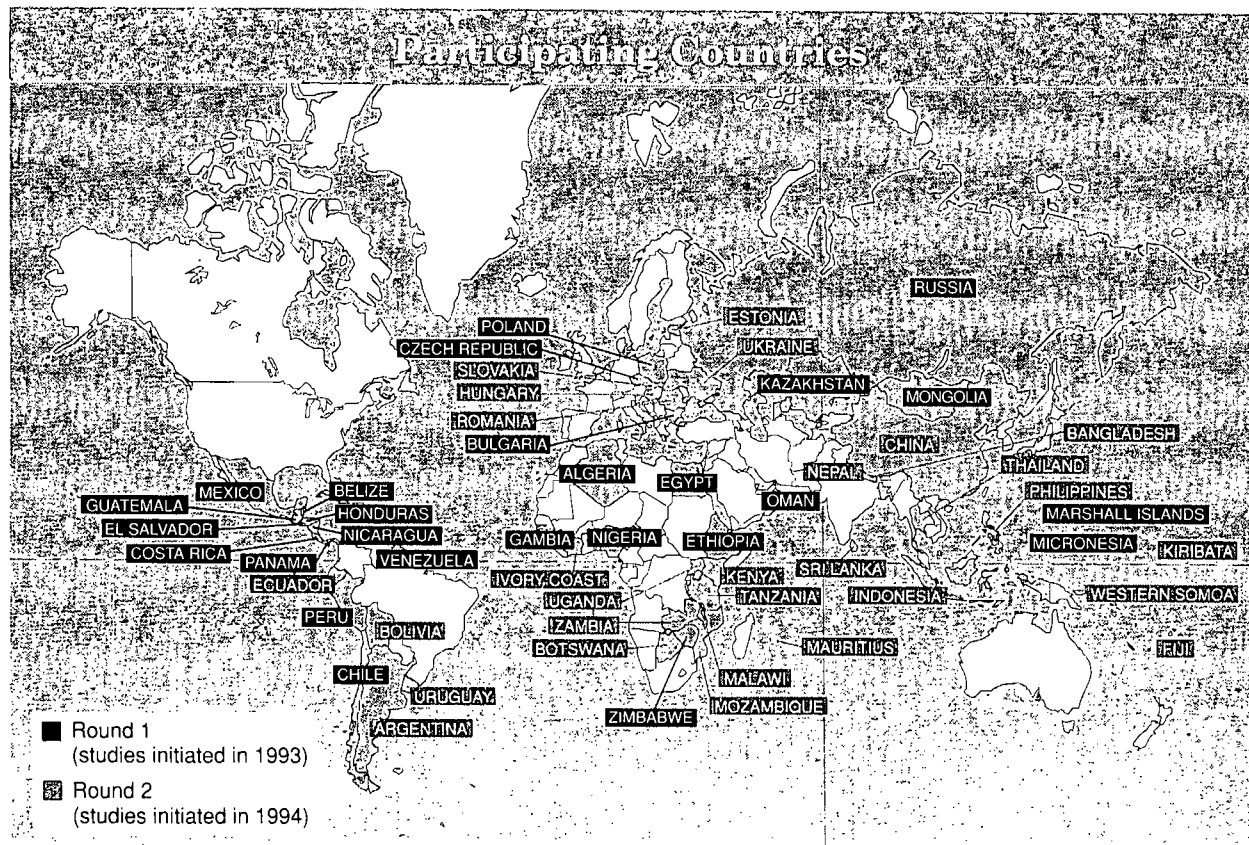
What Are the Final Products and Results from Country Studies?

Management Structure for the U.S. Country Studies Program



Country studies improve the recipient's ability to carry out analyses and assessments and to develop products (usually in the form of well-documented reports) for distribution to the international community. The studies also help countries establish a basis for forming and updating national programs that contain measures for mitigating climate change and facilitating adequate adaptation to climate change, as required by the *Framework Convention on Climate Change*. The U.S. Country Studies Program fosters development of national communication in support of the convention.

Many U.S. Government agencies support this program: U.S. Environmental Protection Agency, U.S. Department of Energy, U.S. Agency for International Development, U.S. Department of State, National Oceanic and Atmospheric Administration, U.S. Department of Agriculture, U.S. Department of Health and Human Services, U.S. Department of the Interior, National Aeronautics and Space Administration, and National Science Foundation.



Schedule of Activities for the U.S. Country Studies Program

1993

■ October – Start of Round 1 Studies

December 8–10 Workshop for Round 1 Study Coordinators (Washington, D.C.)

December 13–16 Round 1 Training Workshop on Emission Inventory Methods (Washington, D.C.)

1994

Jan. 31–Feb. 4 Round 1 Training Workshop on Vulnerability and Adaptation Assessment Methods (Washington, D.C.)

March 21–25 Cosponsor IPCC/UNEP Emission Inventory Workshop for Africa (Nairobi, Kenya)

May 16–20 Central American Vulnerability and Adaptation Assessment Workshop (San Jose, Costa Rica)

June 13–24 Mitigation Assessment Methods for Round 1 Countries (Berkeley, California)

July 26–28 Cosponsor GEF/OLADE Workshop on Incremental Costs for Latin America (Quito, Ecuador)

September 26–30 Pacific Islands and Asia Coastal Vulnerability and Adaptation Workshop (Honolulu, Hawaii)

■ October – Start of Round 2 Studies

October Methods for Estimating Greenhouse Gas Emissions from Nonpoint Sources in Africa (South Africa)

October 3–7 Cosponsor IPCC/UNEP Emission Inventory Workshop for Asia and the Pacific (Chaingmai, Thailand)

November African Vulnerability and Adaptation Assessment Workshop (Focus: fisheries and wildlife) (Zimbabwe)

November 14–18 Cosponsor START Workshop on Climate Change Variability for South Asia (Bangalore, India)

December Management and Coordination of Round 2 Country Studies (Washington, D.C.)

December Emission Inventory Methods for Round 2 Countries (Washington, D.C.)

December 5–9 Cosponsor ACTS/UNEP African Conference on Global Climate Change (Nairobi, Kenya)

1995

January Vulnerability and Adaptation Methods for Round 2 Countries (Washington, D.C.)

February Latin American Inventory and Mitigation Workshop (Focus: land-use and tropical forest issues) (Venezuela)

March Mitigation Assessment Methods for Round 2 Countries (Berkeley, California)

April Inventory and Mitigation Workshop for Transition Countries (Focus: forestry and methane issues)

May International Adaptation Assessment Conference (St. Petersburg, Russia)

**For further
information,
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