

PN-ABU-804
ISN 94518

Winrock International
Environmental Alliance

Training

and

Human Resource Opportunities

Environmental & Natural Resources Policy & Training Project



*Winrock International
Environmental Alliance*

Center for Policy Negotiation

Development Assistance Corporation

The Futures Group

Institute for International Research, Inc.

Iowa State University Center for
Agricultural and Rural Development
Resource and Environmental
Policy Division

The Johns Hopkins University

KBN Engineering and Applied
Sciences, Inc.

The Keystone Center

Management Systems International

New York University Institute for
Economic Analysis

The RAND Corporation

Resources for the Future

Tellus Institute

Tropical Research & Development, Inc.

Tufts University Program for
Study of Sustainable Change
and Development

Tuskegee University

University of Maryland International
Institute for Ecological Economics

University of Rhode Island

Winrock International Institute for
Agricultural Development

Yale University School of Forestry and
Environmental Studies

The Environment and Natural Resources Office of the Bureau for Research and Development of the U.S. Agency for International Development (A.I.D.) sponsors the Environmental and Natural Resources Policy and Training (EPAT) Project. On request, the Winrock International Environmental Alliance provides technical assistance to A.I.D. regional bureaus and field staff, and their counterparts in developing countries, in the areas of policy analysis and research, institutional strengthening and human resources development.

For additional copies or further information, contact:
Dr. Stan Peabody, Chief of Party, EPAT/Technical Assistance
1611 North Kent Street, Suite 600, Arlington, VA 22209—USA
Telephone (703) 525-5430 FAX (703) 516-0481



Environmental & Natural Resources Policy & Training Project

1611 North Kent Street, Suite 600
Arlington, VA 22202, USA

Telephone: (703) 525-9430 FAX: (703) 516-0481
Telex: 6491106

Dear Colleague:

AID's Environment and Natural Resources Policy and Training Project (EPAT) represents the agency's recognition that economic development, use of natural resources, and environmental quality are tightly linked. It is impossible to sustain gains in one of these areas while ignoring the others.

EPAT's objective is to further the adoption of public policies that promote development, sustainable use of natural resources, and preserve or enhance environmental quality. Through the Winrock International Environmental Alliance and the Midwest Universities Consortium for International Activities (MUCIA), EPAT sponsors activities in six major areas: state-of-the-art research, collaborative research, support for policy dialogue, institutional strengthening, information dissemination, and the development of human resources.

The human resources component is intended to develop the skills of individuals in public and private organizations who are engaged in the development, implementation, or evaluation of public and economic policies that affect sustainable uses of natural and environmental resources. To address this goal, EPAT can provide assistance in four areas:

1. Core courses on "Environmental Policy, Regulation, and Management" (through the Winrock International Environmental Alliance) and on "Environmental Economics for Sustainable Development" (through MUCIA).
2. Brief environmental awareness seminars for senior policy makers and officials of nongovernmental organizations that examine the linkages between economic policies and the management of natural and environmental resources.
3. Regional and in-country short, policy-related courses developed and presented in response to buy-in requests from AID missions or bureaus.

4. Workshops, seminars, conferences, and other training-related activities on subjects germane to EPAT's objectives.

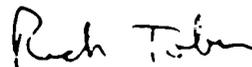
The courses and activities listed in this catalog are meant to be illustrative, not exhaustive. The Winrock International Environmental Alliance will respond to any request for the development of training-related activities within EPAT's broad mandate. Such activities should support efforts to develop and implement policy options that promote sustainable uses of natural and environmental resources and sustainable and equitable economic development.

Regardless of the activity, the Winrock International Environmental Alliance will, whenever possible, ensure that all programs are:

- presented in a language widely understood in the host country
- designed specifically for the intended beneficiaries
- presented in collaboration with local experts or institutions
- highly responsive to the identified needs of AID and its host-country partners

Further information about EPAT's human-resource activities can be obtained by contacting me at the address above or by completing an Activity Request Form, which can be found at the end of this catalog.

Cordially,



Rich Tobin
Director, Human
Resources Development
Winrock International
Environmental Alliance

CONTENTS

CORE COURSES	3
Environmental Policy, Regulation, and Management	3
Environmental Economics for Sustainable Development	4
ENVIRONMENTAL AWARENESS SEMINARS	5
REGIONAL AND IN-COUNTRY SHORT COURSES	6
Environmental and Ecological Economics	6
Extended Benefit-Cost Analysis	6
Market-Based Incentives for Pollution Control	7
Use and Application of User Fees	7
Input-Output Modeling: Development and the Environment	7
Economic Methods for Valuing Environmental Goods	8
Natural Resources Accounting and the Management of Environmental and Natural Resources	8
Economics and the Management of Parks and National Forests	9
Policy Reform and Economic Policy Interventions	9
Evaluating the Economics of Investments in Pollution Prevention in State and Private Enterprises	9
Economic and Environmental Challenges of Global Climate Change	10
Debt-for-Nature Swaps	10
Principles of Pollution Prevention	11
Integrated Energy and Environmental Planning	11
Integrated Water Resources Policy and Planning using a Computerized Water Evaluation and Planning System	12

Integrated Planning for Solid Waste Management in Medium to Large Urban Areas	12
Entrepreneurial Enterprises from Recycling and Composting	13
Environmental Information Disclosure during Transitions to Privatization and Market Economies	13
Environmental Impact Assessment	13
Comparative Risk: Methods and Applications for Setting Environmental Priorities	14
Risk Communication and Environmental Management	14
Environmental Project Management	15
Policy Analysis Skills for Environmental Management	15
Development and Implementation of National Environmental Strategies or Environmental Action Plans	16
Environmental Dispute Resolution: Skills and Strategies	16
Geographic Information Systems for Environmental Management	16
Management Information Systems for Environmental Management	17
National Greenhouse Gas Inventories: Methods for Estimating Emissions and Devising Policy Scenarios	17
Resource Quality Monitoring	18
Skills and Strategies for Private Environmental Organizations	18
Developing National Policies for Environmental Education	18
Developing Programs in Schoolyard Ecology: Localized, Low-Cost Approaches to Hands-On Science and Environmental Education	19
WORKSHOPS, SEMINARS, CONFERENCES, AND OTHER ACTIVITIES	20
FOR FURTHER INFORMATION	21
ACTIVITY REQUEST FORMS	22

CORE COURSES

A major goal of the Environment and Natural Resources Policy and Training Project is to strengthen the capability of institutions responsible for the management of natural and environmental resources to conduct policy and economic studies. The project is also designed to increase the ability of policymakers and policy analysts to implement policies that promote environmentally sustainable development. To achieve these goals, EPAT offers two core courses.

ENVIRONMENTAL POLICY, REGULATION, AND MANAGEMENT (through the Winrock International Environmental Alliance)

The course is designed to enhance participants' capacity to design and implement programs and policies that improve environmental quality and that promote wise use of natural resources. Policy, political, and market failures frequently lead to environmental degradation and resource depletion, so the course emphasizes: a) the development and practical application of analytic and managerial skills necessary to improve enforcement, program and policy development, and the institutional management of existing pollution problems; b) approaches to pollution prevention and waste reduction; and, c) strategies to increase the effective implementation of existing or planned policies that affect the environment and the use of natural resources. The course topics and themes are adapted to reflect the participants' interests and backgrounds.

Intended participants include mid- to upper level administrators and policy analysts in agencies with responsibility for the analysis and management of environmental and natural resource issues. The course may also be relevant to other government officials in these regions who want to create or strengthen environmental and natural resource policies and programs and to representatives of the private sector and nongovernmental organizations.

The course will be offered for the first time from February 22 to March 24, 1993, in Arlington, Virginia. At the request of AID missions or bureaus, this course can be adapted (in terms of content, duration, and language of presentation) for delivery outside the United States.

Anticipated Course Content

- 1. The Health, Economic, and Ecosystem Effects of Pollution and the Benefits of Pollution Prevention**
- 2. Setting Goals and Priorities**
- 3. Approaches to Pollution Control and Prevention**
- 4. Enhancing Enforcement and Compliance**

5. Increasing the Effectiveness of Environmental Impact Assessments
6. Public Participation: Advantages and Concerns
7. Strategic Planning for the Future
8. Technical and Institutional Support Available through the International Community
9. Global Perspectives on Environmental Management
10. Policy Analysis and Problem Resolution

For additional information on this core course, please contact:

Dr. Rich Tobin
Director, Human Resources Development
EPAT/Winrock
1611 N. Kent St., Suite 600
Arlington, VA 22209

Telephone: (703) 525-9430 Fax: (703) 516-0481

ENVIRONMENTAL ECONOMICS FOR SUSTAINABLE DEVELOPMENT (through the
Midwest Universities Consortium for International Activities)

For information on this course only, please contact:

Sharon Pfeifer, Human Resource Director
EPAT/MUCIA
University of Minnesota
2003 Upper Buford Circle, Room NRAB 235
St. Paul, MN 55108-1030

Telephone: (612) 624-1746 Fax: (612) 624-3682

ENVIRONMENTAL AWARENESS SEMINARS

These two- to three-day seminars are intended for a country's (or region's) high-level policy makers. The goal of the seminars is to increase awareness among these officials of the crucial linkages between economic policy, development, and environmental quality. While ministers or department heads in environmental or natural-resource agencies are likely to appreciate these linkages, other senior officials without direct responsibility for environmental management may not be aware of how their agencies and policies affect the quest for sustainable development.

Drawing on material from EPAT's two core courses, these environmental awareness seminars are intended to focus on the broad linkages between economic policies and the management of natural and environmental resources. Topics might include the identification and analysis of economic and regulatory options for sustainable development, government fiscal losses resulting from failures to price natural resources adequately, and the potential role of nongovernmental organizations in environmental management.

Ideally, these seminars will provide excellent opportunities for policy dialogue, institutional strengthening, and regional strategic planning. These seminars might be particularly appropriate at the beginning of new environmental initiatives, during periods of transition to market-based economies, or for efforts directed at facilitating or coordinating the development of regional strategies to protect common environmental resources.

The nature of the intended audience and the goals of the seminars require them to be modified for presentation in each instance. Accordingly, they should be designed in close consultation with the AID missions or bureaus that request assistance in organizing and presenting such seminars.

The Winrock International Environmental Alliance and the Midwest Universities Consortium for International Activities share responsibility for the environmental awareness seminars.

REGIONAL AND IN-COUNTRY SHORT COURSES

The courses listed below can be delivered on demand and accessed through buy-ins to the Winrock International Environmental Alliance. All courses will be adapted to address the needs and preferences of AID missions or bureaus as well as their host-country counterparts. Short courses can be developed in other areas as well as in response to requests from AID missions or bureaus.

ENVIRONMENTAL AND ECOLOGICAL ECONOMICS

Both environmental and ecological economics complement sustainable development projects. Environmental economics takes a microeconomic approach; ecological economics is macroeconomically oriented. The dynamic interaction between both environmental and ecological economics yields a working agenda for research, education, and policies addressing issues of sustainability. This course introduces concepts of environmental and ecological economics. Specific themes include: macro/micro economic theory, sustainability, efficiency, and attempts to treat the environment as a closed-system asset.

Intended Audience: Economists from governments and nongovernmental organizations.

Estimated Length: 5 days

EXTENDED BENEFIT-COST ANALYSIS

Benefit-cost analysis provides a quantitative framework to enable decision makers to weigh the relative merits of alternative environmental policies. Such analysis quantifies information in a structured manner and calculates the anticipated costs and benefits of policy actions or investment alternatives. Benefit-cost analysis is particularly useful in decision-making processes associated with regulatory and environmental control efforts. This course focuses on benefit-cost analysis as it applies to the management of natural resources and emphasizes information collection, decision-making rules, techniques for measurement and quantification, and the use of surveys and other analytical methods.

Intended Audience: Economists from government and nongovernmental organizations.

Estimated Length: 5 to 7 days.

MARKET-BASED INCENTIVES FOR POLLUTION CONTROL

Investments in conservation, rather than in the construction of new plants, mills, factories or other facilities, often offer more cost-effective alternatives to resource management and utilization. Market-based incentives, including the use of rebates, financial rewards, and tax holidays, stimulate conservation strategies and reduce environmental degradation through market forces and appeal to public and private sector utilities. This course focuses on the design and assessment of market-based incentives as mechanisms for pollution control. Although the course will utilize modeling techniques and examples drawn from programs in the United States and Europe, the emphasis will be on the applicability of market-based incentives in developing countries.

Intended Audience: Environmental planners and government and private sector economists.

Estimated Length: 5 to 7 days

USE AND APPLICATION OF USER FEES

Air and water quality, soil fertility, and natural resource sustainability possess economic value in terms of agricultural productivity, food supplies, economic development, and human health. Price-based policy instruments guide economic systems in a manner consistent with essential sustainable ecosystem goals. This course focuses on the use and application of user fees vis-à-vis natural resources and emphasizes the theoretical underpinnings of supply and demand, price-setting strategies, and regulatory mechanisms. The course also addresses price ceilings, in/elasticity, and controls.

Intended Audience: Government economists and environmentalists.

Estimated Length: 5 days

INPUT-OUTPUT MODELING: DEVELOPMENT AND THE ENVIRONMENT

Input-output models can be used to examine interactions among technological choices, economic objectives, and environmental pollution. The use and application of input-output models is emphasized, building from the simplest version to dynamic physical/price/income models. Specific themes include: natural resource use, generation of waste, and technological change. Course material encompasses hypothetical and real-world situations in developing countries and utilizes both mathematical computer language and a ten-sector model of the home economy.

Intended Audience: Government officials with responsibility for national planning; training in economics is essential.

Estimated Length: Four weeks

ECONOMIC METHODS FOR VALUING ENVIRONMENTAL GOODS

Economists have made significant progress in developing methods that provide monetary values for nonmarket resources. When applied successfully, these methods are of significant use in decision making. Despite these opportunities, important concerns remain about nonmarket valuation techniques. It is thus essential to appreciate the strengths and weaknesses of these techniques. This course will provide an introduction to current methods used to value nonmarket commodities. It provides a nontechnical discussion of the state of the art in measuring economic value through the use of case studies involving wildlife, biodiversity, sustainable development, and system dynamics. Finally, the course demonstrates how to implement a complete policy analysis by integrating valuation studies with impact assessment techniques commonly used in resource planning.

Intended Audience: Government economists and economic planners.

Estimated Length: 5 days

NATURAL RESOURCES ACCOUNTING AND THE MANAGEMENT OF ENVIRONMENTAL AND NATURAL RESOURCES

No economy can "live" off its capital. Unfortunately, many resource-dependent countries often deplete natural resource stocks to enhance economic development. One reason for this situation is that these stocks of resources are not adequately valued, and their consumption does not enter into calculations of Gross Domestic Product. Natural resource accounting assigns tangible values to natural resources and demonstrates the linkage between economic development and environment management. This course focuses on natural resource accounting for the management of environmental and natural resources and examines recent efforts to apply the approach in developing countries. The course also emphasizes the economic theory associated with income accounting and depreciation, ecological economics, valuation systems, and issues relating to the feasibility of implementing revised national accounting systems.

Intended Audience: Government economists, managers, and conservation specialists

Estimated Length: 5 days

ECONOMICS AND THE MANAGEMENT OF PARKS AND NATIONAL FORESTS

The application of generally accepted principles of economic analysis to policy formation for the management of parks and national forests represents an innovative approach to natural resource conservation. Trees, when harvested, yield a salable commodity; when left standing, they provide further growth for future use and thus constitute a capital good. Parks and forests also enhance tourism and possess scientific and educational value. Economic forecasting allows for the implementation of efficient harvest and regeneration schedules. This course introduces concepts of forestry economics and policy analysis. Discussion then turns to modelling, economic price/output indicators, optimal rotation (the time between planting and harvesting) strategies, and sources of inefficiency (e.g., biodiversity, global warming, poverty, and debt). Sustained yield practices and agroforestry programs are also emphasized.

Intended Audience: National foresters, economists from governments and nongovernmental organizations.

Estimated Length: 5 days

POLICY REFORM AND ECONOMIC POLICY INTERVENTIONS

Unsustainable economic and development policies perpetuate environmental degradation. Policy reform and economic policy interventions can facilitate the effective management of natural resources. This course focuses on potential intervention strategies aimed at enhancing environmental protection and resource utilization. Specific themes include: the use of subsidies, tax policies, and policies for land and resource tenure; data collection techniques; technology transfers; environmental impact assessments and economic analyses; and private sector contributions. This course discusses mechanisms for improving technical, managerial, and analytical skills as well as public participation and empowerment.

Intended Audience: Government planners and environmentalists.

Estimated Length: 5 days

EVALUATING THE ECONOMICS OF INVESTMENTS IN POLLUTION PREVENTION IN STATE AND PRIVATE ENTERPRISES

Data constraints, regulatory and cost uncertainties, self-imposed requirements to recoup investments in short-term horizons, and a lack of overall analytical frameworks for financial analysis often hinder state and private enterprises in their efforts to evaluate effectively the economics of investments in pollution prevention. Using specially designed

software--Pollution Prevention/ Financial Analysis and Cost Evaluation (*P2/FINANCE*)--the course introduces participants to a tested and systematic approach to the assessments of investments in pollution control. Participants will need access to IBM-compatible 286 computers (386 preferred) with a minimum of 10 MB hard disk space and 1 MB memory. Ideally, there will be at least one computer for each two participants.

Intended Audience: Environmental managers, production engineers, and general managers of state and private enterprises; government officials with responsibility for pollution prevention or reduction.

Estimated Length: 3 days

ECONOMIC AND ENVIRONMENTAL CHALLENGES OF GLOBAL CLIMATE CHANGE

Global climate change represents one of the most pressing environmental issue facing both developed and developing countries. Industrialization and deforestation accelerate the emission of CO₂ into the atmosphere and thereby threaten the fragile balance of the earth's ecosystem. This course examines the latest scientific knowledge on global climate change, addresses issues associated with global climate change, and introduces modelling and simulation techniques (e.g., general circulation models, GIS, and remote sensing). Emphasis is also placed on economic (e.g., benefit-cost and full-cost) analyses and potential policy initiatives to alleviate environmental destruction related to industrialization and deforestation.

Intended Audience: Government officers, economists.

Estimated Length: 3 to 4 days

DEBT-FOR-NATURE SWAPS

Large debt burdens often hinder attempts to initiate environmentally sound policies for economic development. Debt-for-nature swaps offer an innovative and realistic mechanism to renegotiate international financial commitments and enhance natural resource management techniques. This course introduces concepts of debt-for-nature swaps and suggests ways in which such swaps can address environmental and debt-related problems. It analyzes completed debt-for-nature agreements and suggests desirable modifications for implementation. Specific themes include: policy instruments, roles of international lending agencies and nongovernmental institutions, and links between ecosystem conservation and development planning.

Intended Audience: Financial officers, members of nongovernmental organizations, and government officials with responsibility for environmental management.

Estimated Length: 4 days

PRINCIPLES OF POLLUTION PREVENTION

Traditional attempts to control air, water, and soil pollution are often initiated after environmental wastes have been generated. Such approaches to environmental management encompass strictly enforced standards, regulations, and requirements for proper waste disposal, yet often fail to address environmental problems in a satisfactory manner. Pollution prevention, by emphasizing a systematic method for minimizing waste, diminishes the environmental costs associated with growth in urban and industrial sectors. Major themes in this course include: recycling/reuse strategies, materials substitution, and process modification schemes. The attractiveness of the prevention paradigm rests in its applicability to urban, industrial, and agricultural pollution problems.

Intended Audience: Government and industrial planners with responsibility for pollution prevention and waste minimization.

Estimated Length: 5 days

INTEGRATED ENERGY AND ENVIRONMENTAL PLANNING

Many countries face the challenge of energy planning that minimizes social costs and ensures environmental protection. Participants will be introduced to *LEAP*, a computerized, user-friendly system that facilitates least-cost, integrated planning and aids the assessment of long-term energy and environmental options at all spatial scales. Concepts related to integrated, least-cost planning and data needs for *LEAP* analyses are presented and sample cases are utilized to demonstrate a wide range of policy and planning options. Participants will need access to IBM-compatible 286 computers (386 preferred) with a minimum of 10 MB hard disk space and 1 MB memory. Ideally, there will be at least one computer for each two participants.

Intended Audience: Energy planners, policy analysts, and managers of electric utilities.

Estimated length: 5 days

INTEGRATED WATER RESOURCES POLICY AND PLANNING USING A COMPUTERIZED WATER EVALUATION AND PLANNING SYSTEM (WEAP)

The conservation of water, planning for its supply, and the preservation of its quality constitute urgent needs in many countries. To address these concerns it is useful to have a structured approach to integrated supply and demand issues that can be applied to a wide variety of planning situations for water resources. *WEAP*, a user-friendly, microcomputer-based model, provides such an approach. Designed for the evaluation of water development policy and planning options at local, national, and regional levels, *WEAP* offers a structured approach to the integrated analysis of the supply and demand for water. The course introduces users to the concept of integrated water planning using *WEAP* as a tool to organize data and to assess various scenarios. Participants will need access to IBM-compatible 286 computers (386 preferred) with a minimum of 10 MB hard disk space and 1 MB memory. Ideally, there will be at least one computer for each two participants.

Intended Audience: Local and regional water managers, planners, and regulators. Relevant professionals in universities and research institutes.

Estimated Length: 3 days

INTEGRATED PLANNING FOR SOLID WASTE MANAGEMENT IN MEDIUM TO LARGE URBAN AREAS

The diminishing availability of disposal sites and increased emphasis on reuse and recycling typically necessitate long-term planning for solid waste management. In response, officials with responsibility for the management of solid waste must address these changing conditions while preserving the beneficial aspects of traditional collection, recycling, and disposal practices (such as the creation of jobs through informal scavenging). *WASTEPLAN*, a scenario-based computer program, evaluates alternatives for the management of solid waste (e.g., composting, recycling, and incineration). This course introduces users to *WASTEPLAN* and includes hands-on training and follow-up assistance as needed. Participants will need access to IBM-compatible 286 computers (386 preferred) with a minimum of 10 MB hard disk space and 1 MB memory. Ideally, there will be at least one computer for each two participants.

Intended Audience: Environmental managers, waste managers and haulers, and regulators with responsibility for the management of solid waste.

Estimated length: 5 days

ENTREPRENEURIAL ENTERPRISES FROM RECYCLING AND COMPOSTING

Many countries have some form of privately operated recycling networks capable of capturing high percentages of recyclable materials from industrial sources. Such entrepreneurial networks often occur within the informal sector. Despite this situation, issues surrounding hazardous wastes from households and potential resources in organic fractions of materials destined for landfill use are frequently overlooked. This course provides an approach for supplementing recycling activities with methodologies that allow for the recovery of high quality compost from materials usually considered waste. Methods designed to identify and remove household hazardous waste from waste streams before disposal, increase demand for compost, and internalize appropriate institutional support structures are also examined. The course is most appropriate for countries that are labor rich and capital poor.

Intended Audience: Social economists, urban planners, government officials with responsibility for waste management, and representatives of nongovernmental organizations.

Estimated Length: 5 days

ENVIRONMENTAL INFORMATION DISCLOSURE DURING TRANSITIONS TO PRIVATIZATION AND MARKET ECONOMIES

Transitions from centrally planned to market economies or from public to private ownership of individual enterprises raise a number of issues associated with the development and management of environmental data. This course focuses on relevant approaches to data development and access for regulators, enterprises, and investors involved in processes of privatization. Case material examines regulations in the United States and Western Europe (and their applicability elsewhere), identifies elements adaptable to different countries, and explores necessary modifications. Specific themes include: the protection of proprietary information; objectives and methods of public reporting of data; and coordination of regional and international environmental data bases.

Intended Audience: Government regulators, enterprise managers, legal communities, representatives of nongovernmental organizations.

Estimated Length: 3 days

ENVIRONMENTAL IMPACT ASSESSMENT

Environmental impact assessments can contribute to development options that are environmentally sound and sustainable. Such assessments examine the environmental

consequences of policy implementation and typically require remediation of such consequences in project design. Impact assessments also facilitate sustained utilization of natural resources and enhance the capacity of institutions to manage resources effectively. This course emphasizes analysis and identification of pressing local environmental and development issues, interpretation of statistical data, and natural resource management. Examples from the United States are discussed, but the major focus is on the design, implementation, and use of environmental assessments in developing countries.

Intended Audience: Government policy analysts and planners, especially those with responsibility for the review of development-related projects.

Estimated Length: 5 days

COMPARATIVE RISK: METHODS AND APPLICATIONS FOR SETTING ENVIRONMENTAL PRIORITIES

Significant environmental challenges face countries of the developing world, Eastern Europe, and the newly independent states of the former Soviet Union, yet scarce resources necessitate the systematic prioritization of these resources. Such prioritization cannot occur in a political vacuum, but a sound scientific basis can move decision makers in the direction of solutions with desirable benefit-cost ratios. Borrowing from the experiences of the US Environmental Protection Agency and USAID's assessment of environmental risks in Bangkok, Thailand, **Comparative Risk** introduces concepts and methods of comparative risk analysis. Specific themes include approaches to problem definition, data collection, scoring and weighting techniques, participation mechanisms to ensure maximum effectiveness, and country-specific modifications.

Intended Audience: Environmental policymakers from governments, risk assessment experts from academic institutions, and representatives of nongovernmental organizations.

Estimated Length: 4 to 5 days

RISK COMMUNICATION AND ENVIRONMENTAL MANAGEMENT

Public perceptions about environmental risks affect the way the public should be informed about such risks. Despite this awareness, effective risk communication is often a skill that is in short supply. Indeed, the current state of environmental regulation and increased public demand for information suggests the need to incorporate risk communication into strategies for environmental management. This course focuses on techniques for providing risk-related information as well as on the strengths and weaknesses of

various approaches to the topic. Emphasis is also placed on the development of programs on risk communication for organizations in both the public and private sectors.

Intended Audience: Environmental planners and government and private sector officials with responsibility for risk communication.

Estimated Length: 3 days

ENVIRONMENTAL PROJECT MANAGEMENT

Effective project management necessitates the efficient use of time, materials, and human resources. This course addresses several fundamental components of effective environmental management: project mechanics and managing people to maximize productivity and performance. Specific themes include: problem definition, project planning, cost/budget estimation, diagramming, implementation, and directing multidisciplinary teams. Emphasis is also placed on communication skills, supervision techniques, and standard operating procedures.

Intended Audience: Government planners and project managers.

Estimated Length: 3 to 4 days

POLICY ANALYSIS SKILLS FOR ENVIRONMENTAL MANAGEMENT

Regardless of the scientific evidence justifying improved environmental management, success in achieving desired goals is crucially dependent on how well institutions design and implement public policies. Consequently, this course focuses on the interactions between public policy, management of natural and environmental resources, and policy evaluation and attempts to strengthen the analytical skills of those responsible for developing and implementing policy. Emphasizing strategies to increase the feasibility of implementing environmental policies, the course utilizes case studies from both the industrialized and developing worlds and explores the lessons learned from each. This course also emphasizes decision-making processes, the environmental implications of policy implementation, benefit-cost analyses, and relevant evaluation strategies.

Intended Audience: Policy analysts in agencies with responsibility for the analysis and management of natural and environmental resource issues.

Estimated Length: 5 days

DEVELOPMENT AND IMPLEMENTATION OF NATIONAL ENVIRONMENTAL STRATEGIES OR ENVIRONMENTAL ACTION PLANS

National environmental strategies and action plans provide a comprehensive approach to resolve or prevent problems associated with sustainable resource utilization and economic development. Such strategies allow for environmental impacts of development programs to be calculated and accounted for prior to policy implementation. This course focuses on national environmental strategies and action plans. Specific themes include the collection and analysis of data, public participation, rational decision making, issue prioritization, and policy dialogue.

Intended Audience: Government planners and environmentalists.

Estimated Length: 5 days

ENVIRONMENTAL DISPUTE RESOLUTION: SKILLS AND STRATEGIES

Officials with responsibility for the management of natural and environmental resources frequently face too many disputes with too little time to address them. In consequence, serious instances of environmental harm and threats to human health go unresolved. Negotiation, mediation, and other forms of dispute resolution offer ways to bring together conflicting parties to reach agreements acceptable to all sides. This course will examine the need for and benefits of dispute resolution. The roles, techniques, and responsibilities of negotiators and mediators will be explored, as well as the institutions and procedures that facilitate resolution of disputes. Special attention is given to the peculiar characteristics of environmental problems: multiple parties, complex scientific issues, uncertain effects, and inadequate information.

Intended Audience: Persons forming or implementing policy for environmental and natural resources.

Estimated Length: 3 to 4 days

GEOGRAPHIC INFORMATION SYSTEMS FOR ENVIRONMENTAL MANAGEMENT

Economic and industrial development usually lead to vast changes in environmental quality. While some of these changes are monitored others are not. Even when data on environmental effects are available, these data are often displayed in tables rather than visually. Geographic Information Systems (GIS) provide a spatially explicit method of displaying and manipulating data and can offer a new look at existing problems. This course introduces GIS and focuses on data acquisition, management, and analysis. Specific themes include: data collection and manipulation, land-use models,

inventory assessment, and environmental management, particularly as they relate to developing countries. Suitable IBM-compatible computers will be necessary.

Intended Audience: Environmental managers and planners.

Estimated Length: 5 days

MANAGEMENT INFORMATION SYSTEMS FOR ENVIRONMENTAL MANAGEMENT

In recent years issues relating to the environment have received significant attention and have required the collection, analysis, and storage of vast amounts of disparate information. Consequently, this course is designed to provide participants with an overall appreciation of the need for and desirability of effective systems for managing environmental information. The course, which includes laboratory work, will also describe the general domain of relevant environmental information and how to access, organize, process, and use it.

Intended Audience: Executive level administrators responsible for organizing and implementing national or subnational environmental programs.

Estimated Length: 3 days

NATIONAL GREENHOUSE GAS INVENTORIES: METHODS FOR ESTIMATING EMISSIONS AND DEVISING POLICY SCENARIOS

National accounts of greenhouse gas emissions are needed to set targets for future emissions, plan control strategies, and to monitor progress toward obtaining abatement objectives. International efforts to develop national emission inventories currently encompass a number of developing countries. Nonetheless, enhanced abatement strategies at both the national and international levels require the expansion of data collection and analyses. This course covers greenhouse gas sources and sinks and the problems surrounding their estimation. Participants are also introduced to the use of G2S2 (Greenhouse Gas Scenario System), a database and scenario assessment tool. Participants will need access to IBM compatible 286 computers (386 preferred) with a minimum of 10 MB hard disk space and 1 MB memory. Ideally, there will be at least one computer for each two participants.

Intended Audience: Energy and environmental analysts in government ministries with responsibility for monitoring or preventing greenhouse gases, representatives from nongovernmental organizations.

Estimated Length: 1 to 2 days

RESOURCE QUALITY MONITORING

Sustainable development requires the maintenance of high levels of environmental quality. Such maintenance requires the establishment of and adherence to certain biophysical limits. This course addresses resource quality monitoring. It utilizes analytical models to illustrate necessary conditions for environmental maintenance over time. Specific themes include: quantification techniques, intertemporal models, and long-term environmental planning. Emphasis is also placed on on-site monitoring and local training programs.

Intended Audience: Government planners, economists, and environmentalists.

Estimated Length: 5 days

SKILLS AND STRATEGIES FOR PRIVATE ENVIRONMENTAL ORGANIZATIONS

Private environmental organizations can provide a critical link between governments and local communities. Such organizations can assist in training and the delivery of services and can be valuable sources of information for government decision makers. Despite these possibilities, many nongovernmental organizations in developing countries lack the skills and experience necessary to operate effectively and to contribute to sustainable development. Consequently, this course seeks to transfer relevant experiences from successful environmental organizations in the United States to their counterparts in developing countries. Topics include communications, training, research, fund raising, public participation, and innovative financing for environmental projects (e.g., debt-for-nature swaps). Collaboration with environmental and development agencies will also be discussed.

Intended Audience: Leaders of nongovernmental organizations with an interest in the management of environmental and natural resources.

Estimated Length: 5 days

DEVELOPING NATIONAL POLICIES FOR ENVIRONMENTAL EDUCATION

The focus of this course is on approaches to formulating public policy for activities that create heightened awareness of environmental issues and a disposition to act in environmentally sound ways. The course deals with: mechanisms for identifying the environmental issues that should be addressed through publicly supported educational efforts; the policy adjustments that are necessary in order to allow these issues to be covered in the formal curriculum at various levels of education; and the legal, human, and

financial resources required to start and sustain appropriate environmental education activities. Discussion will also consider ways of mobilizing public support for and involvement in environmental education. A special emphasis is placed on ways in which policy makers can work with the mass media and nongovernmental organizations in order to mount public education campaigns and on ways in which behavioral change and environmental awareness can be encouraged among a country's businesses and industries.

Intended Audience: Policy makers and planners from ministries of education and the environment; heads of national or provincial education offices; representatives from nongovernmental organizations and of the mass media, particularly editors and executives.

Estimated Length: 5 days

DEVELOPING PROGRAMS IN SCHOOLYARD ECOLOGY: LOCALIZED, LOW-COST APPROACHES TO HANDS-ON SCIENCE AND ENVIRONMENTAL EDUCATION

This course offers a comprehensive program in "schoolyard ecology." It serves two functions: environmental education and science/mathematics education. Developed in conjunction with scientists, pedagogic experts, and school teachers, the course emphasizes hands-on inquiry and open-ended investigations utilizing the plants, animals, habitats, and human impacts accessible in the typical schoolyard. The course focuses on programs for the upper primary grades; modifications for older and younger age groups are also discussed.

Intended Audience: Environmental educators, experts in pedagogic techniques, science education experts, school teachers (especially at the elementary level), administrators, officials from education ministries, representatives from nongovernmental organizations, and scientific expert in the natural history of local plants and animals.

Estimated Length: a) minimum of three days to convey the essential ideas and to coordinate participants' initial efforts; b) one week if a program design is desired; c) two to three weeks if the objective is a rough outline of a curriculum developed for local environmental/biological/social conditions and the development of core ideas for 50 to 100 investigations; d) six weeks for a comprehensive course that includes surveys of various schoolyards throughout a country.

WORKSHOPS, SEMINARS, CONFERENCES, AND OTHER ACTIVITIES

The short courses and training programs described above do not always provide suitable environments for the exchange of ideas. Likewise, such activities may be ill-suited for policy dialogues or efforts to strengthen institutions as they deal with the management of natural and environmental resources. To address these concerns (and to increase the potential for successful outcomes), it may be desirable to inform and educate officials of host countries through the use of workshops, seminars, or conferences that encourage the imaginative exchange of ideas and experiences.

One example of such interchange occurred when AID/Jamaica asked the Winrock International Environmental Alliance to work with the Government of Jamaica to define the mission and determine a strategy for the country's recently created National Resources Conservation Authority. Members of the Alliance conducted a workshop in Jamaica that focused on strategic planning and the development of an action plan for the Authority.

Other activities can similarly benefit from a seminar or conference format. In response to buy-in requests from AID missions or bureaus, as an illustration, the Winrock International Environmental Alliance is prepared to organize in-country seminars or conferences to:

1. Understand and manage the effects of economic and environmental policies of industrialized nations on environmental issues in developing countries;
2. Develop and implement policy initiatives related to international environmental conventions and agreements;
3. Coordinate and monitor the implementation of national and regional strategies for environmental protection;
4. Negotiate and facilitate regional coordination and implementation of environmental policies;
5. Launch new technical assistance projects or periodically review existing projects.

The Winrock International Environmental Alliance is also prepared to assist AID missions with other activities related to the development of human resources, including assessment of training needs, preparation of training plans, assistance with placement in degree and post-doctoral programs, and oversight of long-term degree programs. One approach to the latter is to maximize the benefits of training by emphasizing cohort training and network development to continue professional exchanges and growth after training.

FOR FURTHER INFORMATION...

One of EPAT's primary goals is to be highly responsive to the identified needs of AID missions and their host country partners. To address this goal and to design activities that are appropriate for the intended audience, it is desirable to have as much input as possible from mission staff and likely participants. For each course or activity for which you are interested or would like additional information, please complete the form on the next page and return it to:

Dr. Rich Tobin
Director, Human Resources Development
Winrock International Environmental Alliance
1611 N. Kent St., Suite 600
Arlington, VA 22209 USA

Telephone: (703) 525-9430 Fax: (703) 516-0481

If you are interested in short courses, workshops, or other activities not listed in this catalog, you can also use the form to request the development of specialized programs that are suited exactly to the needs of the intended beneficiaries.

Once the information on the form is received, a detailed proposal will be prepared for the sponsor's review and approval. The proposal will include a tentative agenda, suggested course or activity content, a proposed budget, and information on the individuals from the Winrock International Alliance who will have responsibility for the activity. All EPAT activities are accessed through buy-ins from AID missions or bureaus.

WINROCK INTERNATIONAL ENVIRONMENTAL ALLIANCE

ACTIVITY REQUEST FORM

Preferred Title of Activity (for example, Workshop on Subject X, Conference on Subject Y, or Short Course on Subject Z):

What key topics or themes should be emphasized? _____

Briefly describe the likely participants, indicating their backgrounds and relative familiarity with the topics or themes: _____

Preferred language: English French Spanish Portuguese

If it is not possible to arrange the activity in a language other than English, is English acceptable? Yes ___ No ___

Desired length: ___ days or ___ weeks

Desired dates: _____
1st Preference 2nd Preference

Desired location: _____

Estimated number of participants: _____

Who will be responsible for identifying and selecting participants?

___ AID mission or bureau ___ Host-country organization
___ EPAT staff ___ Other (please specify)

Local participation in the planning and delivery of all activities is highly desirable. If appropriate, please identify a local institution or individual(s) with which the Winrock International Environmental Alliance might be able to collaborate:

If the course or other activity is to be conducted outside the United States, will assistance be available either from local AID staff or host-country nationals in making local arrangements (e.g., issuing invitations, selecting venue, arranging for participants' travel, meals, and accommodations)? Yes _____ No _____

If you know of another AID mission or bureau that might be interested in cosponsoring the activity, please provide the name, address, and telephone or facsimile number of a contact at that mission or bureau:

Please provide any other relevant information that would assist in the planning and delivery of exactly the kind of activity in which you are interested.

Name and address of person providing this information:

Telephone: _____

Fax: _____

Please return the completed form to:

Dr. Rich Tobin
Director, Human Resources Development
Winrock International Environmental Alliance
1611 N. Kent St., Suite 600
Arlington, VA 22209 USA

Telephone: (703) 525-9430 Fax: (703) 516-0481

WINROCK INTERNATIONAL ENVIRONMENTAL ALLIANCE

ACTIVITY REQUEST FORM

Preferred Title of Activity (for example, Workshop on Subject X, Conference on Subject Y, or Short Course on Subject Z):

What key topics or themes should be emphasized? _____

Briefly describe the likely participants, indicating their backgrounds and relative familiarity with the topics or themes: _____

Preferred language: English French Spanish Portuguese

If it is not possible to arrange the activity in a language other than English, is English acceptable? Yes ___ No ___

Desired length: ___ days or ___ weeks

Desired dates: _____
1st Preference 2nd Preference

Desired location: _____

Estimated number of participants: _____

Who will be responsible for identifying and selecting participants?

___ AID mission or bureau ___ Host-country organization
___ EPAT staff ___ Other (please specify)

Local participation in the planning and delivery of all activities is highly desirable. If appropriate, please identify a local institution or individual(s) with which the Winrock International Environmental Alliance might be able to collaborate:

If the course or other activity is to be conducted outside the United States, will assistance be available either from local AID staff or host-country nationals in making local arrangements (e.g., issuing invitations, selecting venue, arranging for participants' travel, meals, and accommodations)? Yes _____ No _____

If you know of another AID mission or bureau that might be interested in cosponsoring the activity, please provide the name, address, and telephone or facsimile number of a contact at that mission or bureau:

Please provide any other relevant information that would assist in the planning and delivery of exactly the kind of activity in which you are interested.

Name and address of person providing this information:

Telephone: _____

Fax: _____

Please return the completed form to:

Dr. Rich Tobin
Director, Human Resources Development
Winrock International Environmental Alliance
1611 N. Kent St., Suite 600
Arlington, VA 22209 USA

Telephone: (703) 525-9430 Fax: (703) 516-0481