

F. EDUCATION ABOUT THE ENVIRONMENT: Community-based Program Examples

F. 1. EDUCATION STRATEGIES THAT WORK

Examples provided for each model are described in more detail in Appendix F. 2 and other appendices. Appendix F. 2 also provides additional examples not listed here. Appendix reference is in ().

PERSONAL ACTION

Tools that enable individuals or small groups to assess and evaluate personal practices which affect environmental quality

Examples -

Farm*A*Syst, Home*A*Syst (Appendix F. 2)

(USDA Cooperative State Research, Education, and Extension Service (CSREES); Natural Resources Conservation Service (NRCS) and US EPA)

A groundwater risk inventory for use by individuals on personal property. Inventory results lead to personal decisions about action steps from suggestions provided in the publication. Use of these tools is enhanced when an instructor works with an individual property owner or people work in small groups.

Monroe County, PA Water Quality School (Appendix F. 2)

Drinking Water Education Programs - Individuals bring well water samples to a community meeting or county fair for individual assessment and counseling.

COMMUNITY SERVICE PROJECTS

Activities that respond to citizen interest in helping their community and which provide an opportunity to learn about environmental management while doing something.

Examples -

National Association of Service and Conservation Corps (Appendix F. 2)

NASCC works with young adults to identify and accomplish community environmental service projects. Their guide lists resources available to assist groups to choose and accomplish specific projects. Resources are listed according to the following categories of activities: community greening, emergency management, habitat restoration, hazardous substances, parks and public spaces, resource conservation, trails, water resources.

Give Water A Hand (Appendix F. 2)

This national service-learning curriculum assists 30 partners to provide youth with an “Action Guide.” The “Action Guide” enables youth to inventory local environmental management successes and needs, then link to a natural resource professional and community groups to develop and carry out a service project.

COMMUNITY ENVIRONMENTAL MONITORING

Environmental monitoring provides citizens with a “hands on” opportunity to learn how environmental management decisions are made. Citizens use established protocols for gathering information about specific topics. Data is often, but not always, compiled and

analyzed by natural resource or pollution prevention specialists who are part of a consortium.

Examples -

GREEN, Global Rivers Environmental Education Network (Appendix F. 2)

GREEN provides water monitoring information, guides, and an international newsletter.

GREEN's education program focuses on the watershed concept to link schools and communities. Steps to creating the watershed education program include:

- Identify program goals including community issues and resources and identify an advisory committee that broadly represents the community
- Prepare a study design to include monitoring and data use and to relate watershed issues with as many disciplines as possible

Save Our Streams - Izaak Walton League of America (Appendix F. 2)

The Izaak Walton League provides a comprehensive guide to assist interested people in setting up a local SOS project to focus on stream ecology and monitoring. It serves a large group of volunteer monitors from across the country. A computer data base tracks national efforts.

Mountain Association for Community Economic Development
(Appendix F. 2)

(Harker, Donald and Elizabeth Natter. 1995. *Where We Live - A Citizen's Guide to Conducting a Community Environmental Inventory*. Island Press.)

The Mountain Association provides this guide to better enable citizens to participate in local environmental decisions. The goal is to arm citizens with enough relevant information to allow them to participate in public procedures in an effective way. Citizens are encouraged to start by forming a group to inventory the environment, holding a public meeting to describe activities, conducting an environmental concerns survey and then determine topics for inventory.

COMMUNITY VISION PLANNING

A local sustainability initiative includes a process for developing a community vision and setting goals. Goals are then linked to specific measures chosen by the community to indicate progress. A community identifies its goals and measures of success based on its own history and sense of identity. Once relevant goals and indicators have been chosen, community groups can make plans and take action to meet high priority goals.

Examples -

Rural Environmental Planning (Appendix F. 2)

(Sargent, Frederic O., Paul Lusk, Jose A. Rivera, and Maria Varela. 1991. *Rural Environmental Planning for Sustainable Communities*. Island Press)

Rural Environmental Planning (REP) provides a strategy and tools that allow the citizen, the planner, and the "technical team" to work together. Features of the process include: a) discovery of public goals by survey and public discussion; b) resource inventories prepared with by a team representing all aspects of the community; c) development of a plan of action that relates to environmental, political and financial constraints - - the action plan includes steps to protect the environment, diversify economic opportunity, and preserve cultural values.

Green Communities Assistance Kit (Appendix G. 2)

Web Page resource developed by EPA Region 3, www.epa.gov/ecosystems/enviro/
Includes tips and tools to assist communities to: analyze trends, develop a vision statement, develop an action plan, and implement the plan.

Watershed based community planning (Appendix G. 2)

(“Top 10 Watershed Lessons Learned,” the EPA Office of Wetlands and Watersheds)
In recent years, EPA funding of non-point source pollution control in communities often lead to the establishment of numerous local organizations, which arose as independent local promoters of good watershed management. In “Top 10 Watershed Lessons Learned,” EPA provides several examples and resources for lessons learned about watershed protection derived from the communities and individuals who work on watershed issues.

COMMUNITY CHANGE RESEARCH

A participatory process for involving local people in summarizing local experience and knowledge and selecting target conservation behaviors.

Examples -

GreenCOM - The Human Nature Project (Appendix A. 3)

(Booth, Elizabeth Mills. 1996. Starting With Behavior - A Participatory Process for Selecting Target Behaviors in Environmental Programs.)

A participatory process for selecting target behaviors includes: define the ideal behavior, conduct research with “doers” and “non-doers,” select and negotiate target behaviors, and develop strategies which reflect findings.

The “SONDEO” A Rapid Reconnaissance Approach for Situational Assessment (Appendix E)

(Butler, Lorna Michael, Colette Dephelps, and Kelsey Gray, coordinators. 1995. Western Regional Extension Publications, Washington State University.)

SONDEO means to “sound out.” It is a rapid reconnaissance or rapid appraisal method of learning about local people's situations, experiences, problems, and perspectives directly from the people themselves. Local people are actively involved throughout the process.

GROUPS TAKING RESPONSIBILITY FOR THEIR OWN IMPACTS

Businesses, organizations and community councils can take the lead. Even while relating to the local ecosystem, most environmental management decisions are very specific. Individual groups can analyze their own activities and determine their own plan of action. Groups can act on their own, but are more effective if their actions provide leadership in the community and contribute to achievement of a community vision.

Examples -

The Natural Step (Appendix F. 2)

The Natural Step is a guide for businesses that seek to operate in a sustainable manner. Local businesses interested in this process form a local organization for self-education and support.

Pennsylvania Environmental Council (Appendix F. 2)

In 1973, Pennsylvania municipalities were granted the authority to establish environmental advisory councils. The Pennsylvania Environmental Council supports the effective operation of community councils through consultation, participation in meetings, training, and detailed guides for management of land use related environmental concerns.

Sea Change, an urban Philadelphia non-profit organization (Appendix F. 2)

Sea Change moto - “We can’t change the wind, but we can change the sail.” Organizers focus on making small changes within several themes: a model community garden model focusing on self support, organic gardening techniques, and meeting local needs for growing things, beauty and peace; youth program models which provide salaries, engage youth with environmental

professionals, and engage youth as community teachers; an urban center for environmental health information; identification of micro enterprise and economic opportunities related to the environment; support regional environmental management efforts through organization of workshops with community groups; work in partnership with other community-oriented organizations.

COMMUNITY RECOGNITION

A great way to educate is through public recognition of successful results.

Examples -

The Good Neighbor Project (Appendix F. 2)

(Sanford J. Lewis et al.. *The Good Neighbor Handbook*. PO Box 79225 Waverly, MA 02179, 617/489-3686)

Provides help on how to develop “good neighbor” agreements with industries and facilities. The “good neighbor agreement” allows citizen inspection of a facility and an in-depth audit of company documents relative to environmental impacts. A final report summarizes the findings of the study and a negotiated agreement between the facility and the community about environmental protection activities.

Groundwater Guardian program (Appendix F. 2)

(*A Community Guide to Groundwater Guardian*. Edited by Cindy Kreifels, 1997. The Groundwater Foundation)

This model provides recognition for communities who create a “results oriented action plan” and achieve their goals. Programs are begun by people with a variety of backgrounds. Most are volunteer community leaders.

ADVOCACY ACTIVITIES

The boundary between advocacy and education are sometimes blurred. In the process of advocating environmental policy or management choices, group members often gather, summarize, and interpret a lot of information about a specific environmental issue and its relationship to the community.

Examples -

River Network (Appendix F. 2)

(Wallin, Phillip and Rita Haberman. 1992. *People Protecting Rivers: A Collection of Lessons from Successful Grassroots Activists*.)

This non-profit organization offers leadership for groups interested in protecting river quality. This resource cited in Appendix D provides “keys to success” from five river case studies.

Environmental Defense Fund (Appendix F. 2)

The EDF Pollution Prevention Alliance staff have provided an Environmental Sustainability Kit for communities, but do not provide organization at the community level. The kit is designed to help community groups help themselves. It provides background information about sustainability and community organization strategies, worksheets to help accomplish each step and a list of resources.

F. 2. U. S. MODELS, EXAMPLES

Fortunately, there are numerous examples of community-based education programs about the environment. This summary describes key national programs and regional examples.

Community Coalition for Environmental Justice

4759 15th Ave. NE, Seattle, WA 98105

Involves local industrial neighborhoods in environmental problem identification and action planning. Housing in these neighborhoods is located in close proximity to a number of industries. EPA Region 10 and Seattle Public Health Department provide resources and information as requested, including GIS mapping and local health statistics as well as information about local industry and locally present environmental chemicals. Local issues include storage of hazardous chemicals, noise, dust, hazardous emissions, and potential location of new industries with potential for environmental contamination.

Conservation Technology Information Center (CTIC)

“Know Your Watershed” Program

Web page, search guide - www.ctic.purdue.edu/

Nuzum, Robert.

Watershed Management - What Works and What Doesn't.

Watershed Management Kit in a Box

Partnerships for Watersheds video

Getting to Know Your Local Watershed

Building Local Partnerships

Leading and Communicating

Managing Conflict

Putting Together a Watershed Management Plan

Reflections of a Lake

The “Know Your Watershed” program supports community efforts in a variety of ways. Watersheds or communities can join a network and complete a detailed questionnaire about local watershed issues. Information about other watersheds can be searched on the Internet. Communities can learn about efforts to solve similar problems. CTIC also provides a watershed planning handbook and tools. Tools lead groups through steps including: assets and needs assessment, identifying partners, analyzing data to determine priorities for action, creating education programs which target specific audiences, targeting technical resources and assistance, monitor and evaluate.

Environmental Defense Fund (EDF)

EDF Pollution Prevention Alliance staff. 1996. *Environmental Sustainability Kit.*

Starts with the assumption that a group or groups within the community want to make their community more sustainable. Tools in the kit focus on pollution prevention. The kit recommends starting with a “project idea.” The kit provides background information about sustainability and community organization strategies, worksheets to help accomplish each step and a list of resources. Worksheets provided by the kit include: developing a project idea (provides an organization, resources, and partners analysis); community assessment (an asset assessment model; identifying and recruiting stakeholders; developing ground rules for the project team; 10 steps for working with people on a particular goal (these emphasize understanding and satisfying personal needs or goals with practical activities); message strategy development, sample indicators of progress community assessment listing environmental indicators, social and economic indicators. Case studies feature several models for accomplishing community goals - good neighbor agreements; formation of a multi-stakeholder task force by a sewage treatment facility; a pollution prevention program which involves

workshops and awards for businesses, subsidized consulting, business-to-business coaching, and vocational school education; a community supported agriculture program; use of environmental penalties to meet low-income community health and environment needs - priorities and decisions are made by an advisory team.

Give Water A Hand - Action Guide by R. Cairn, S. Cairn, K. Row, and E. Andrews. 1996. A USDA CSREES, University of Wisconsin and privately funded project.

Give Water A Hand is a work book which provides youth with step-by-step instructions about how to study their community watershed and create a service project which meets specific community needs. Needs are identified through use of a farm, school, home, or community assessment tool. Youth identify and prioritize specific needs, map their watershed, present their findings to a local expert, plan their project, carry out and evaluate their project. This resource assumes some previous training or interest in water topics.

Global Rivers Environmental Education Network (GREEN)

Sally Cole-Misch, Larry Price, David Schmidt. 1996. *Sourcebook for Watershed Education*.

Provides a strategy which uses the watershed concept to link schools and communities. The strategy is based on a community organization or consortium of organizations who work between schools and the community. A coordinator at the school is recommended. Numerous resources, plans, and examples and lists are provided to support each organization step. Steps to creating the watershed education program include:

1. Identify program goals including community issues and resources and identify an advisory committee that broadly represents the community
2. Identify program goals addressing: education, school-community, and environmental goals
3. Prepare a study design to include monitoring and data use and to relate watershed issues with as many disciplines as possible
4. Recruit teachers and schools to participate
5. Draft a budget
6. Identify community resources that could support the program
7. Conduct youth program
8. Review and assess the program

The Good Neighbor Project

Sanford J. Lewis et al. *The Good Neighbor Handbook*
PO Box 79225 Waverly, MA 02179, 617/489-3686

Provides help on how to develop “good neighbor” agreements with industries and facilities. The “good neighbor agreement” allows citizen inspection of a facility and an in-depth audit of company documents relative to environmental impacts. A final report summarizes the findings of the study and a negotiated agreement between the facility and the community about environmental protection activities.

The Groundwater Foundation

Cindy Kreifels, ed. 1997. *A Community Guide to Groundwater Guardian*.

This model provides recognition for communities who create a “results oriented action plan” and achieve their goals. Programs are begun by people with a variety of backgrounds. Most are volunteer community leaders. Steps and components of the Groundwater Guardian program include:

1. Learn about program and request information
 - a. Identify a group where this program can be introduced and planning started.
2. Plan
 - a. Form a groundwater guardian team
 - b. Summit entry form and receive assistance kit

- c. Develop result oriented activities and submit proposed plans. The results oriented activity plan requires the following steps.
 - i. assess local groundwater concerns and problems.
 - ii. identify community benefits
 - iii. create measurable objectives
 - iv. develop timetable for plan implementation
 - v. identify resources needed to complete the plan
 - vi. create an evaluation strategy
- 3. Act
 - a. Implement plan and report
- 4. Designation
- 5. Continuing designation
 - a. Submit an entry form with new result oriented action plans
 - b. Prepare and submit an annual report

INFORM

Fishbein, Bette and Caroline Gelb. 1992. *Making Less Garbage - A Planning Guide for Communities*

This resource identifies key components of local source reduction plans and provides details about how to make a source reduction plan happen. Steps include: set goals; measure progress towards goals; identify a separate administrative authority to manage achievement of goals; identify opportunities for source reduction; provide goals for each opportunity; provide support such as technical assistance, waste audits, and material assessments, campaigns, grants, pilots, awards and contests, reuse program organization. Other support recommendations include: business recognition, public education campaigns, economic incentives, and regulation. A “planning checklist” provides detailed options for each step in the process.

Wise, Marian and Lauren Kenworthy. 1993. *Preventing Industrial Toxic Hazards - A Guide for Communities*

This guide provides a survey, including 11 worksheets, that can be used to survey the source reduction activities of a local plant. The remainder of the guide provides resources to enable citizens to access and use data needed to complete or interpret the plant survey. The worksheets and background materials provide very specific questions and information about source reduction. Community organizing and development processes are not emphasized in this model.

Izaak Walton League of America

Karen Firehock. 1994. *Save Our Streams - Volunteer Trainer's Handbook*

This is a comprehensive guide to assist interested people in setting up a local SOS project to focus on stream ecology and monitoring. It serves a large group of volunteer monitors from across the country. A national computer data base tracks national efforts. Steps include:

1. Get started
 - a. Determine the scope of the project - geographical boundaries
 - b. Determine which agencies, organizations, businesses, and landowners should be involved
 - c. Create long and short term goals
 - d. Define the volunteer's job and recruit
 - e. Find creative ways to involve different groups from the community
 - f. Introduce the project to interested parties and bring them together to plan
2. Organize
 - a. Identify watershed issues and inventory the watershed
 - b. Become familiar with skills of volunteers
 - c. Design a monitoring plan
 - d. Work with government agencies
 - e. Provide quality controls
 - f. Manage data collection and retrieval

- g. Determine uses for data
 - h. Use data to identify specific areas of concern
 - i. Create a project budget and raise funds
3. Train volunteers
 4. Program promotion
 - a. Target audience
 - b. Work with media
 - c. Expand partnerships
 - d. Report findings and recommendations
 - e. Enlist help for projects

Monroe County Pennsylvania Water Quality School

Monroe County is the second fastest growing county in Pennsylvania. Maintaining wells and septic systems are new experiences for many residents. In a needs assessment survey, water quality issues were identified as a major concern. To respond to needs Monroe County Cooperative Extension office organized the Monroe County Coalition for a Cleaner Environment (MCCCE). The coalition organized and sponsors a three part water quality school for citizens from Monroe and surrounding counties. They also provided numerous other resources including workshops on pond management, a conference for community officials on protecting water resources, an environmental directory for local citizens, and workshops at community centers to better reach diverse audiences and part-time residents.

Mountain Association for Community Economic Development

Harker, Donald and Elizabeth Natter. 1995. *Where We Live - A Citizen's Guide to Conducting a Community Environmental Inventory*. Island Press.

This guide focuses on helping communities inventory their local environment to better enable citizens to participate in local environmental decisions. The goal is to arm citizens with enough relevant information to allow them to participate in public procedures in an effective way. Inventory samples are provided. Citizens are encouraged to choose inventories of most use to them: Environmental Concerns Inventory (tracks local sources of pollution - worksheets and background on 17 topics are provided), Natural Resources Inventory (summarizes key resources, evaluates their status - worksheets and measurement strategies for 9 topics are provided), Individual Facilities Audit (reviews permitted activities as well as other activities which facilities are not required to report). Tips on how to analyze information and expand on government required information are also provided. Their process recommends starting by forming a group to inventory the environment, holding a public meeting to describe activities, conducting an environmental concerns survey, determine topics for inventory, select a study area, form working groups, keep the public involved, map information, analyze pollutants and who is impacted.

National Association of Service and Conservation Corps (NASCC)

Tools for Environmental Service: An Inventory of Project and Environmental Education Resources for Conservation and Service Corps and Other Stewards of the Earth. 1996.

NASCC works with young adults to identify and accomplish community environmental service projects. The guide assumes that a volunteer group has already been organized. It provides resources available to assist groups to choose and accomplish specific projects. Resources are listed according to the following categories of activities: community greening, emergency management, habitat restoration, hazardous substances,, parks and public spaces, resource conservation, trails, water resources.

National Environmental Education Advancement Project (NEEAP)

Abby Ruskey and Dr. Richard Wilke. 1996. *Promoting Environmental Education: An Action Handbook for Strengthening EE in Your State and Community*
Recommends steps and strategies for local and state environmental education organizations and other interested organizations to build a stronger and more effective teacher support network for delivering environmental education to youth.

The Natural Step

A guide developed in Sweden for businesses that seek to operate in a sustainable manner. Local businesses interested in this process form a local organization for self-education and support. The Natural Step is based on four guidelines or “system conditions” required for basic life support systems to remain healthy - substances taken from the earth’s crust cannot systematically increase in the biosphere; substances produced by society cannot systematically increase in the biosphere; the physical basis for the productivity and diversity of nature must not be systematically deteriorated; in order to meet the previous three system conditions, there must be a fair and efficient use of resources to meet human needs.

Pennsylvania Environmental Council

The EAC Handbook - A Guide for Pennsylvania’s Municipal Environmental Advisory Councils. 1996.

In 1973, Pennsylvania municipalities were granted the authority to establish environmental advisory councils. The Pennsylvania Environmental Council supports the effective operation of community councils through provision of consultation, meetings, training and detailed guides to local management of land use related environmental concerns.

Pennsylvania Groundwater Policy Education Project

Sponsored by Pennsylvania State University Cooperative Extension and the League of Women Voters of Pennsylvania

Joy Drohan, Charles Abdalla, Beth Marshall, Edie Stevens. 1997. *“Lessons from Successful Project Leaders,” 1996 conference summary.*

Since 1992, the Groundwater Policy Education Project has awarded 39 small grants to local groups that could demonstrate formation of a local coalition working toward sustained education efforts. A 1996 conference with project representatives identified the following keys to success: define your audience, make the program locally relevant, start small, tie the message into locally pressing issues, form and use a coalition, provide credible information tailored to the locality, use a number of media for sharing information, train educators, develop an education plan, ensure that education events fit the plan, take officials on a tour of the area, go to citizens or provide a service that brings citizens to you, assess and evaluate project impacts.

River Network

Wallin, Phillip and Rita Haberman. 1992. *People Protecting Rivers: A Collection of Lessons from Successful Grassroots Activists.*

This resource provides “keys to success” from five river case studies.

1. Form a coalition
2. Focus on a key issue
3. Find a positive solution
4. Establish an organization
5. Raise funds and hire a director
6. Survey natural resources and create a conservation plan
7. Work cooperatively with public agencies
8. Recruit people with technical experience
9. Propose an alternative to the project that is threatening

10. Advertise the economic value of your goal
11. Build local support through public events
12. Provide a regular newsletter
13. Start a network of citizen monitors
14. Put yourself in a position of strength for negotiation
15. Choose the right forum for action
16. Look to state and local government for land-use control
17. Land acquisition may be the best way to protect truly critical areas

Charles River, MA

- " a private organization took responsibility to plan and fund a corridor of land adjacent to the river, lead by a charismatic leader
- " the NGO built friendships and worked with public officials from all levels of government - a newsletter kept communications going, contributions were rewarded
- " all resources within the corridor were mapped and prioritized
- " plans emphasized non-structural flood control, protection of privately held land, and discouraged diversion of water for uses
- " goal was to upgrade the river classification
- " the NGO produced public education resources including - a river profile, a wetlands profile, a slide show, a theme name, public and youth events, gathered business support, encouraged recreation uses
- " built a citizen monitoring program to monitor law compliance
- " good development projects were rewarded

Clark Fork River, MA, ID

- " a coalition built a broad base of support focusing on community consensus
- " defined a clear mission statement for the organization
- " provide "user friendly" ways for citizens to get involved in technical issues
- " become an accurate source of information by carefully researching issues
- " recruit support of local businesses
- " take advantage of existing laws to protect resources
- " encourage person to person negotiating
- " provide incentives to bring polluters to the table
- " work through EPA on interstate issues
- " river basin studies were used to identify issues
- " prioritize issues and plan an approach
- " deputize citizens to take charge of specific problems
- " focused on local communication including hosting public events, local fund raising, a newsletter, and a board of generalists

Gauley River, WVA

- " citizens group hired a campaign director
- " recreation group interests were shared so that groups would provide a united front
- " organized around defeating the installation of a hydro power project by altering the project purpose, finding allies, taking advantage of technical expertise, work with US Representatives, tailor a solution
- " promoted the economic benefits of resource protection using the expertise of a natural resource economist - data was shared with local businesses
- " the recreation community helped to raise funds and educate VIPs
- " worked with landowners and private organizations on land acquisition

Sacramento River, CA

- " the River Trust challenged conventional wisdom about using levees and rip rap to control flooding, evaluating the effectiveness of structures in place - they promoted alternative techniques which had less environmental impact

- " worked with state and local government agencies who understood local issues to make changes in federal management policies, continued to work with federal agencies also
- " develop a comprehensive plan including all relevant issues
- " involve all interested parties - identify all concerns
- " provide as much interaction with the public as possible
- " build on successes - continue to use strategies which have proved successful
- " keep your coalition informed
- " prioritize actions so that economically feasible actions can be identified

Upper Mississippi River, MN

- " created a program that combined state and local river protection - maintain a working relationship with state agencies
- " consistent funding source improves potential for success
- " provide an inventory of resources and sensitive areas
- " be prepared to purchase lands that should not be developed
- " review and revise plans
- " consider how to protect areas within the environmental corridor but exempt from regulations
- " monitor water quality
- " use citizen and technical advisory committees, rely on people who are experienced
- " provide training
- " develop informational materials - newsletters, video, fact sheets
- " recognize good work
- " develop relationships with property owners
- " host public events and conferences
- " involve citizen and school groups

Sargent, Frederic O., Paul Lusk, Jose A. Rivera, and Maria Varela. 1991. *Rural Environmental Planning for Sustainable Communities*. Island Press.

The purpose of this book is to help rural communities become sustainable through a balance of economic development and environmental protection in accord with the carrying capacity of the land. The process, called REP (Rural Environmental Planning) provides a strategy and tools that allow the citizen, the planner, and the "technical team" work together. Features of the process include: a) discovery of public goals by survey and public discussion; b) resource inventories prepared with by a team representing all aspects of the community; c) development of a plan of action that relates to environmental, political and financial constraints; d) action plan includes steps to protect the environment, diversify economic opportunity, and preserve cultural values.

Sea Change Resource Center INC/CDC, 1608 North Carlisle St., Philadelphia, PA 19121, 215/978-5930

Sea Change moto - "We can't change the wind, but we can change the sail." Sea Change is a non-profit enterprise development corporation initially established to train and educate residents primarily located in the economically devastated areas of North Central Philadelphia. Organizers focus on making small changes within several themes: a model community garden model focusing on self support, organic gardening techniques, and meeting local needs for growing things, beauty and peace; youth program models which provide salaries, engage youth with environmental professionals, and engage youth as community teachers; an urban center for environmental health information; identification of micro enterprise and economic opportunities related to the environment; support regional environmental management efforts through organization of workshops with community groups; work in partnership with other community-oriented organizations.

USDA. 1996. *Urban Resource Partnerships, Annual Report*.

Supported by seven Federal Agencies - USDA CSREES, Forest Service, and NRCS; US Department of Housing and Urban Development; US Department of the Interior Fish and Wildlife Service and National Park Service; US EPA Atlanta, Chicago, New York, Seattle, Denver, East St. Louis, Los Angeles and Philadelphia each receive \$500,000 per year in a grant from USDA. A local program administrator is funded through partner resources. Each city establishes a steering committee responsible for making decisions about disbursement of funds locally. Steering committee decisions are based on their assessment of natural resource and community needs. They assemble a technical assistance team to work on-site with community members and their projects.

USDA Cooperative State Research, Education, and Extension Service (CSREES)

Elaine Andrews, Elva Farrell, Joe Heimlich, Richard Ponzio, Kelly Warren. 1995. *Educating Young People About Water - A guide to program planning and evaluation*. ERIC at Ohio State University.

Provides program planning and program evaluation workbooks designed to enable community groups to plan youth water education programs that relate to specific youth, community, and local water issues. A program instigator, planning in partnership with related organizations, and ensuring quality and longevity by integrating a program into an established organization are key to development of a successful program. Top ten recommendations include – A successful water education program should: have stated education goals; be connected to community water issues; help instill a sense of place and a responsibility for stewardship; meet youth educational and personal needs including fun/recreation; involve youth as full partners and acknowledge their contributions; involve community partners; uses the support of an organization to provide continuity and stability and to insure quality; uses program design and activities to further program goals and address community needs; delivers information and skills effectively; is evaluated; insights are incorporated into new programs.

Natural Resource and Environmental Management program (NREM), *Natural Resource and Environmental Management Community Needs Assessment*. 1995.

Available from state Extension offices.

Survey and interpretation tools on diskette for PCs

This software program was developed to assist a local group or organization to identify local environmental concerns. It could be used as one step in a community needs assessment process and help to provide information useful for education program planning. The diskette provides automatic data tabulation and cross-tabs. The program provides assistance in identifying a sample base and a script for summarizing results. The 27 questions cover: general attitudes about the environment; community impacts on the environment; environmental contamination by industry and community activities. Another section allows the collection of demographic data.

USDA Cooperative State Research, Education, and Extension Service (CSREES); Natural Resources Conservation Service (NRCS) and US EPA

*Farm*A*Syst*, multiple authors. Available from state Extension office.

*Home*A*Syst*, multiple authors. Available from state Extension office.

Uses topic specific checklist to help individuals analyze the potential for various practices to harm the environment. Best practices are provided within the checklist choices. Checklist items were generated and reviewed by numerous subject matter specialists. Training is provided by local professionals, as needed. Evaluations indicate that training greatly enhances likelihood of use.

U.S. EPA. 1997. *Community-Based Environmental Protection: A Resource Book for Protecting Ecosystems and Communities*. EPA 230-B-96-003.

This guide provides a foundation for understanding community-based environmental protection, tools and techniques for determining local management needs, and 30 case studies. Steps for protecting the environment include: identifying goals and approach; assessing conditions - local ecosystems, links between ecosystems and the economy, links between ecosystems and quality of life; identifying ecosystem protection strategies; evaluating the potential impact of an environmental protection strategy. Uses a modified community development approach.

U.S. General Accounting Office. 1995. *Agriculture and the Environment: Information on and Characteristics of Selected Watershed Projects*. Report to the Committee on Agriculture, Nutrition, and Forestry, U.S. Senate. GAO/RCED-95-218.

This report reviews lessons learned from nine innovative or successful watershed-based projects out of an inventory of 618 funded nationally. Participants from all nine projects agreed on two key points: 1) the need for flexibility in the kinds of financial and technical assistance provided by federal agencies; and 2) local tailoring of approaches to watershed management. Project participants emphasized that the keys to reducing agricultural pollution include: 1) building citizen cooperation through education; 2) getting stakeholders to participate in developing project goals; and 3) tailoring project strategies, water quality monitoring, and regulatory enforcement efforts to local conditions.

Watershed '96

Elaine Andrews, Josetta Hawthorne, and Kathleen Pickering. 1996. *Watershed Education - Goals and Strategies for Training, Communication, and Partnerships*
This symposium report provides recommendations from 50 experienced water and watershed organizers and educators that would improve the quality of watershed based programs. Key challenges for watershed programs include: clarifying language, connecting people with their local environment, targeting audiences, and improving knowledge level. Panelists and small group sessions identified training, communication, and partnership goals and provided strategies to meet each goal.

F. 3. INTERNATIONAL MODELS, EXAMPLES

“Community-Based Environmental Education Planning - A Selected Bibliography,” prepared by Anne Camozzi and EcoLogic & Associates for this project includes additional references about international programs and resources. See Appendix G.

African Association for Literacy and Adult Education and the United Nations Education Program (UNEP)

Edward B. Rugumayo and Victor O. Ibikunle-Johnson, editors. 1987. *Environmental Education Through Adult Education.*

Program goals are to be human-centered, needs-oriented, endogenous (based on the values of the society), and self-reliant. Facilitators of development programs must be in direct and continuing contact with local people. Adult educators must be able to go to the villages and learn from the people, share knowledge and experience, and tap into empirical knowledge and traditional wisdom. Programs must promote utilization of resources rationally in a harmonious relation with the environment. They must be developed using self-management and participation in decision making by all. This comprehensive manual provides teaching guides for four themes: environmental health; agroforestry; population, environment and development; urban/industrial development. Each unit includes: basic principles of the topic, major problems and issues, general and specific objectives, strategies and methodologies for achieving those objectives, suggested instructional aides, basic knowledge and skills required of the educator, facts and figures related to the theme, available research results and relevant application, case studies, sample units, content topics related to the theme, and additional resources. Educators are encouraged to base their teaching on the following principles:

- a) the interest of the adults must be captured
- b) learning must be centered on experience
- c) learning must be focused on problems
- d) the learner must be motivated to change behavior
- e) the learner needs to know what knowledge, skills or behaviors they are missing
- f) the learner must know what they will achieve
- g) the learner must have opportunities to put the new knowledge, skill or behavior into practice
- h) the learner must have reinforcement for the new behavior
- i) the learner needs the support of a sequence of relevant and appropriate study materials
- j) a clear perception of the problem must be stimulated
- k) an appropriate setting and methods must be chosen

Institute for International Cooperation of the German Adult Education Association (IIZ/DVV)

Heine Apel and Anne Camozzi. 1997. *Adult Education and Development.*

Chapter 3 provides detailed recommendations about designing participatory and community-based approaches. The need for this approach is based on a 1982 UNESCO definition of the purpose of environmental education, "to aid citizens in becoming environmentally knowledgeable and above all, skilled and dedicated citizens who are willing to work, individually and collectively, toward achieving and/or maintaining a dynamic equilibrium between quality of life and quality of the environment." Community-based environmental action stems **from** the community rather than being directed **at** the community. Participation implies both audience participation in the learning program and involvement in solving local environmental problems. Steps include:

- a) understand the strengths and barriers of your organization in order to develop an action plan which keeps limitations in mind and uses resources efficiently.
- b) define the community you will address - ecological, bio-regional, cultural, economic. Consider how the political and social aspects of community will influence the program goal. Use a lifestyle-centered approach; answer the question "learning for what?" Some answers might be - for survival, to save time, for better health.

c) involve learners at all stages of the design and delivery of the program. The remainder of the book provides detailed advice on using the five steps of program design: assessing needs and setting objectives; choosing appropriate methods, materials and content; choosing effective delivery methods; using facilitation as part of an effective learning climate; and evaluation.

US Peace Corps

David Wood and Diane Walton Wood. 1990. *How to Plan a Conservation Education Program*. Center for International Development and Environment of the World Resources Institute and the US Fish and Wildlife Service.

This publication provides a manual for Peace Corps workers, non-government organizations and natural resource managers who want to develop conservation programs that address sustainable development and effective resource management initiatives. It recommends a 5 step process involving community members and local professionals in every step.

I - Assess the environmental situation

This step involves the community in identifying a problem and identifying technical solutions. Scope, cause, and the seriousness of the problem are investigated. Resources needed to solve the problem, such as money, labor, and expertise, are evaluated before an action is determined.

II - Identify the audience

The target groups must be able to contribute to an environmental problem and perceive the changes advocated by the program as being in their own best interests. If people must be convinced to do something that is not in their own best interest then education is not the solution and an alternative method of making change, such as finding a new way to meet people's needs, law enforcement, financial compensation or social pressure is needed.

III - Identifying the message

To plan an education program, the educator must learn why people need the education program - are they aware of the problem, understand how they are connected, know what to do, motivated to take action. It is important to gather answers to this information prior to developing the program content. The program plan should include the information you learn in a problem statement. Then should provide a rationale for the program, the program's goal, the intended outcome, special motivating factors, deliver information in a context that is understandable by the audience.

IV - Selecting a strategy

An effective strategy should reach the program's target audience and effectively communicate the program's information. When developing the strategy, consider how target audiences prefer to receive information, who are reliable conveyers of information, length and complexity of the message, length of the education program, who will deliver the program, training needed by educators, resources needed, availability of resources from other sources, results of similar education strategies, how the strategy fits with the sponsoring organization.

V - Evaluation

Did people actually acquire the knowledge, attitudes or skills identified in the program goals?