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Joint Appeal Mission to Washington [2]

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Senator, Love:



"The Earth in Our Hands"

relates well to your
reference to the vision of
Annette Kane the boy

Executive Director

National Council of Catholic Women

with the
book.
So true!

A.K

1275 K Street, N.W.

Suite 975

Washington, D.C. 20005

202-682-0334



**PHOTOCOPY
PRESERVATION**

PHOTOCOPY PRESERVATION

PARTNERS:

National Council of Catholic Women

USDA Forest Service

USDA Soil Conservation Service

National Fish and Wildlife Foundation

National Catholic Rural Life Conference

North American Conference on Christianity and Ecology

Associates of NCCW, Inc.

Archdiocese of St. Paul and Minneapolis, Most Reverend John R. Roach, D.D.

Diocese of Baton Rouge, Most Reverend Stanley T. Ott, S.T.D.

Diocese of Youngstown, Most Reverend James W. Malone, D.D.

Diocese of Shreveport, Most Reverend William B. Friend, D.D.

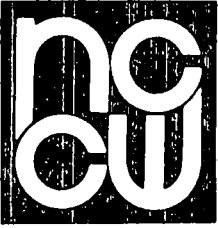
Margaret Harris

Margaret Mealey

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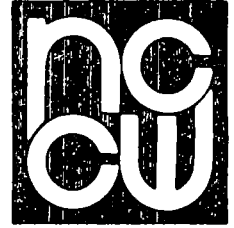
For additional information contact:

Patricia Janik, Program Director
National Council of Catholic Women
1275 K St., N.W. Ste. 975
WASHINGTON, D.C. 20005
(202) 682-0334



NATIONAL COUNCIL OF CATHOLIC WOMEN

1275 K Street, N.W., Suite 975
Washington, DC 20005



NATIONAL COUNCIL OF CATHOLIC WOMEN LAUNCHING NATIONAL ENVIRONMENTAL PROGRAM

The Earth: In Our Hands Is Unique Partnership With
The U.S. Department of Agriculture's Forest Service
and Soil Conservation Service

Washington, D.C., May 8, 1992...Today Carroll Quinn, President of the National Council of Catholic Women (NCCW) announced the establishment of a national environmental program, *The Earth: In Our Hands*, in partnership with the U.S. Department of Agriculture's Forest Service and Soil Conservation Service.

According to Mrs. Quinn, "This program will give individuals, NCCW affiliates and community organizations an opportunity to become involved, to increase their awareness of natural resources issues and, working in partnership with public and private agencies and other interested groups and individuals, to make a difference in this vital area."

Several international events have drawn the Church to involvement in environmental issues, including Pope John Paul II's 1990 message, "Peace with God, Peace with All Creation." NCCW's program is one of the first major national programs to be implemented by a Catholic organization. It puts into action the statement on the environment, adopted in November 1991 by the U.S. Catholic bishops, which calls for organizations such as NCCW to work together with families, scientists and other agencies to confront the massive problems and "save the planet for our children and generations yet unborn."

- more -

NEWS RELEASE

Pat Janik, NCCW's Program Director, says, "The grim evidence of environmental crisis is visible in a multitude of ways including polluted air and water, loss of farmlands, wetlands and forests, extinction of species and global warming. It became clear to our leadership that with the power of nearly one million women in over 8000 affiliates across the United States, we could truly make a difference."

In a resolution passed earlier this year, NCCW policy states, "respect for creation is a moral imperative and environmental concern is the ultimate respect life issue...the responsibility of all people throughout the world."

"This is no less than a moral challenge," according to NCCW Executive Director Annette Kane. "We are encouraging our affiliate organizations and their members to utilize our network to accomplish a wide range of projects, such as local advisory efforts, community education campaigns, recycling initiatives, and volunteer work on specific local, state and federal government agency projects."

The Earth: In Our Hands is funded by grants from several organizations and individuals, (see attached list of partners), including the National Fish and Wildlife Foundation, the National Catholic Rural Life Conference, the North American Conference on Christianity and Ecology and several dioceses. According to Pat Janik, "It is due to the generosity of our partners that this important environmental program has become reality. We are always seeking the support of additional partners to help this initiative grow and flourish."

These grants have enabled NCCW to send program packets free of charge to its 8000 Council affiliates. In addition to program information, the packets include the announcement of "The Earth: In Our Hands Environmental Stewardship Awards" -- to be presented "to the affiliate performing the most outstanding work in natural resource conservation." NCCW also encourages interested individuals and groups to become involved. Additional program packets are available for \$5.00 plus postage. Contact NCCW, 1275 K Street N.W., Suite 975, Washington, D.C. 20005.

The National Council of Catholic Women is a federation of 8,000 Catholic women's organizations. NCCW encourages social action programs throughout the U.S. and also represents American Catholic women in national and international organizations. Among the many programs sponsored by NCCW and its member organizations are Water For Life, which funds clean water projects providing safe and easily accessible water supplies to Third World communities, and Respite, a volunteer program which provides full-time caregivers of elderly or disabled relatives some time to themselves on a weekly basis. NCCW is headquartered in Washington, D.C.

FOR FURTHER INFORMATION, CONTACT:

Pat Janik, Program Director
202/682-0334

Julie Hunter Galdo, Public Relations
703/849-8640

NCCW's *THE EARTH: IN OUR HANDS*

Partners

Funding for *The Earth: In Our Hands* has been made possible by grants from the following organizations and individuals.

National Fish and Wildlife Foundation
National Catholic Rural Life Conference
North American Conference on Christianity and Ecology
Associates of NCCW, Inc.
Archdiocese of St. Paul and Minneapolis,
 Most Reverend John R. Roach, D.D.
Diocese of Baton Rouge,
 Most Reverend Stanley T. Ott, S.T.D.
Diocese of Youngstown,
 Most Reverend James W. Malone, D.D.
Diocese of Shreveport,
 Most Reverend William B. Friend, D.D.
Margaret Harris
Margaret Mealey



United States
Department of
Agriculture

Forest
Service

Washington
Office

14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

Reply To: 1620/3000

Date: APR 16 1992

Dear NCCW Member:

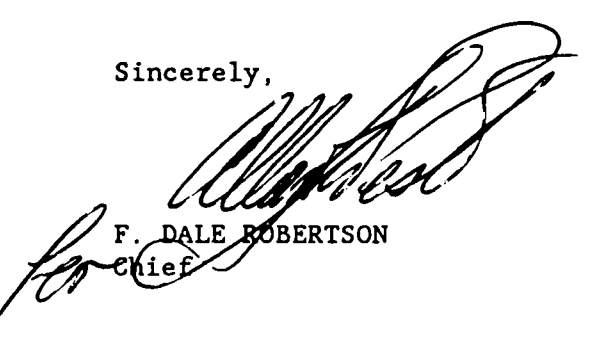
We are pleased with our newly established partnership with the National Council of Catholic Women. In the 1990's we believe that the way to accomplish many of the environmental tasks of this country is through partnerships such as this one.

I encourage each of you to contact your local Forest Supervisor and your State Forester to see how you can get involved in activities in your local area. You may want to see what role you can play in helping to deliver natural resource conservation education which has as one of its goals, fostering the individual's responsibility to conserve, preserve and wisely use natural resources.

President Bush launched the America the Beautiful Program in 1991 which includes a massive tree-planting program. To reach the President's goal of a billion trees per year, we need help of volunteer groups such as yours. Contact your State Forester to see how you can get involved.

One of the Forest Service's main functions is to be a good steward of the land. I know that this is part of your motivation, too. I look forward to our organizations working together toward this goal.

Sincerely,



F. DALE ROBERTSON
Chief



United States
Department of
Agriculture

Soil
Conservation
Service

April 1992

Dear Affiliate:

The USDA Soil Conservation Service (SCS) is extremely proud to be a co-sponsor of your new program, "The Earth: In Our Hands".

The SCS believes in and endorses the concept that individuals increase their awareness of natural resource issues and become involved in solving local natural resource problems in partnership with public and private agencies as well as other interested organizations.

For additional information, call your local SCS office listed in the telephone directory blue pages in the Federal Government section under U.S. Department of Agriculture; your local Soil and Water Conservation District or 1-800-THE-SOIL.

Sincerely,

JEFFREY G. ANLIKER
National Volunteer Coordinator



The Soil Conservation Service
is an agency of the
Department of Agriculture

AN EQUAL OPPORTUNITY EMPLOYER

SCS-AS-1
10-79



Ways To Protect Soil and Water Resources

What You Can Do In Your Community

Conservation is everybody's business. Working together, we can conserve the precious natural resources upon which our lives depend. No matter how small, local actions count. Here is some information on things you can do locally to conserve, improve, and sustain our soil, water, and related resources.

1. Prepare a directory of local, State, and Federal government agencies and private sector groups that provide information and guidance on natural resource conservation projects.
2. Adopt a section of a stream and keep it clean. Beautify the area and help prevent stream bank erosion by planting appropriate grasses, shrubs, and trees.
3. Create a community recreation area. Determine what its conservation needs are, then implement your plan.
4. Develop a conservation education program to present to professional organizations, civic clubs, and youth and church groups. Use films, slides, speeches, debates, and demonstrations to illustrate environmental problems and solutions.
5. Establish a scenic overlook along a highway. Feature conservation practices such as shrubs planted on contours or terraces.
6. Help public and private school librarians establish permanent sections on environmental improvement and natural resource management. Encourage librarians to subscribe to periodicals that specialize in natural resources and conservation. Ask local businesses and conservation districts to sponsor the subscriptions.
7. Create a guide book illustrating specific conservation measures that can be seen on "show-me" trips. Include information about historic landmarks. Design tours for farmers, school children, tourists, and civic, professional, and business groups.
8. Invite birds to your home and to areas around public buildings. Plant appropriate trees and bushes that provide food and cover.
9. Plan, plant, and care for tree windbreaks along roads, near schools, on farmlands, and around airports.
10. Submit conservation feature stories to your local newspaper, radio, and television stations.
11. Create conservation messages on scanner cards for viewing on cable television. Ask station personnel to help you develop a series of cards.
12. Organize an anti-litter campaign.
13. Interest your local Welcome Wagon or similar organization in environmental issues. Enlist its help in distributing literature on conservation practices and solutions to environmental problems.
14. Improve wildlife habitat. Encourage landowners and others to plant shrubs, grasses, and trees that attract and provide food and cover for wildlife.
15. Volunteer your services to a local conservation district. Help prepare newsletters, exhibits, demonstrations, conservation tours, soil stewardship programs, and radio and television programs.
16. Learn about soil surveys and the valuable information they provide. Meet with citizens' groups to explain how important soil surveys are in your community.
17. Find a market for recyclable materials. Then organize a center for recycling paper, glass, plastics, aluminum, and other materials.
18. Develop and publish a community conservation assistance directory. Include names, addresses, and telephone numbers of individuals, organizations,

agencies, and businesses that help solve specific environmental problems. Describe briefly the help they offer.

19. Build and set up bird feeders and houses. If mosquitoes are a problem in your community, set up bat houses. One bat can consume as many as 3,000 mosquitoes in one night.
20. Develop nature and conservation study trails along streams and in wooded areas in your community.
21. Create conservation messages and ask local merchants to print your messages on store bags and boxes.
22. Compile, publish, and distribute a list of anti-pollution ordinances in your community.
23. Organize a large-scale automobile litter bag campaign. Try to get a litter bag in every car in your community.
24. Establish a plant bank for exchanging information about plants available for use on public property.
25. Create a conservation speakers' bureau. Arrange for young people and members of environmental organizations to make presentations to schools.
26. Encourage utility and transit officials to replace abandoned rights-of-way with greenways for pedestrian paths or bicycle trails.
27. Organize conservation study sessions for local day camps and day care centers.
28. Plant trees, shrubs, and flowers as living screens around trash dumps, auto graveyards, and other unsightly areas.
29. Transform a vacant lot into a mini-park or roadside rest area.
30. Make mulch! Don't burn leaves or haul them to a sanitary land fill every fall. Instead, organize community mulch-making, then spread the mulch on bare land, along roadsides, or other places where enriched soil is needed.

31. Improve fish habitat in local streams by building low log dams, miniature waterfalls, and small pools.

32. Organize an environmental affairs advisory council for units of local government.

33. Develop conservation planting projects for Earth Day, Arbor Day, and other special occasions. Take photos for news stories and invite the local media to cover your events.

34. Identify shrubs, trees, and other plants that provide the best food and shelter for wildlife in your region. Encourage park managers, schools, and civic groups to create or add to these plantings.

35. Investigate the possibility of establishing a conservation learning trail in a local park or recreation area. Use numbered posts to mark learning sites. Create a brochure that briefly describes the numbered trees, plants, outcrops of rock, and wildlife habitat at the site. Place the brochures in a specially constructed "mail box" for free distribution at the entrance to the site.

36. Locate vacant lots, school yards, parking lots, and other places where there is erosion. Arrange with city officials to conduct a ground cover planting project to help control the erosion. Publicize your success with before and after photographs.

37. Keep a calendar that denotes the dates of flower shows, county fairs, and school and park festivities. Contact organizers in advance and offer to prepare an exhibit of ground cover plants that grow well in your neighborhood. Prepare instruction sheets on how to plant the ground cover. Explain how the plants help protect water quality and prevent soil erosion.

38. Contact your local office of the U.S. Department of Agriculture's Soil Conservation Service (SCS) or other resource management agencies. Ask for an instruction sheet on how to plant trees and shrubs. Distribute the instructions widely throughout the community, focusing first on schools and libraries.

Prepared by USDA-SCS, Office of Public Affairs,
P.O. Box 2890, Washington, DC 20013.

All USDA programs and services are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

' The Roots o 'Arbor Day

Arbor Day was the idea of J. Sterling Morton of Nebraska City. Morton, editor of Nebraska's first newspaper, tirelessly advocated planting trees on the native grasslands of his adopted state. The early settlers needed trees for fuel, food and building material, and to provide windbreaks and shade.

In 1872 Morton first proposed a tree planting holiday to be called "Arbor Day" at a meeting of the State Board of Agriculture. Prizes were offered to counties and individuals for properly planting the largest number of trees on that day. It was estimated that more than 1 million trees were planted in Nebraska on the first Arbor Day.



"Each generation takes the Earth as trustees. We ought to bequeath to posterity as many forests and orchards as we have exhausted and consumed."

J. Sterling Morton
Founder of Arbor Day

During the 1870s, other states passed legislation to observe Arbor Day and the tradition began in schools in 1882. By 1894 Arbor Day was celebrated in every state and has now spread to other countries.

J. Sterling Morton was proud of the success of Arbor Day and noted "Other holidays repose upon the past; Arbor Day proposes for the future."

Arbor Day Dates

Alabama — Last full week in February
Alaska — Third Monday in May
Arizona — Friday following April 1 (Northern counties); Friday following February 1 (Southern counties)
Arkansas — Third Monday in March
California — March 7-14
Colorado — Third Friday in April
Connecticut — April 30
Delaware — Last Friday in April
District of Columbia — Last Friday in April
Florida — Third Friday in January
Guam — First Friday in November
Georgia — Third Friday in February
Hawaii — First Friday in November
Idaho — Last Friday in April
Illinois — Last Friday in April
Indiana — Second Friday in April
Iowa — Last Friday in April
Kansas — Last Friday in March
Kentucky — First Friday in April
Louisiana — Third Friday in January
Maine — Third full week in May
Maryland — First Wednesday in April
Massachusetts — April 28-May 5
Michigan — Third full week in April
Minnesota — Last Friday in April
Mississippi — Second Friday in February
Missouri — First Friday in April
Montana — Last Friday in April

Nebraska — Last Friday in April
Nevada — Southern — February 28; Northern — April 23
New Hampshire — Last Friday in April
New Jersey — Last Friday in April
New Mexico — Second Friday in March
New York — Last Friday in April
North Carolina — First Friday following March 15
North Dakota — First Friday in May
Ohio — Last Friday in April
Oklahoma — Last full week in March
Oregon — First full week in April
Pennsylvania — Last Friday in April
Rhode Island — Last Friday in April
South Carolina — First Friday in December
South Dakota — Last Friday in April
Tennessee — First Friday in March
Texas — Last Friday in April
Utah — Last Friday in April
Vermont — First Friday in May
Virginia — Second Friday in April
Virgin Islands — Last Friday in September
Washington — Second Wednesday in April
West Virginia — Second Friday in April
Wisconsin — Last Friday in April
Wyoming — Last Monday in April
National Arbor Day — Last Friday in April

Celebrate Arbor Day!



An Arbor Day Celebration can be simple and brief or an all-day or all-week observance. It can be sponsored by a neighborhood organization or school, or involve the entire city.

Raise the flag, strike up the band! Make Arbor Day fun, make it memorable. Organize a fun run. Have a poster or poetry contest. Get the PTA to sponsor a children's pageant or play.

Have an Arbor Day concert of songs about trees or with tree names in their titles. Ask a civic group to promote a paper drive. Use the proceeds to buy a special tree to plant in a public space. Ask a local radio station to sponsor a tree trivia contest and give away trees to the winners. Conduct a tree hike to see outstanding, unusual or historic trees.

Dedicate a forest or tree or a flower bed in a park and make it an occasion to talk about stewardship. Ask a local nursery or garden center to hold an open house. Organize an Arbor Day fair.

You can obtain a free "Celebrate Arbor Day!" packet by writing The National Arbor Day Foundation. The packet contains a sample proclamation, a children's Arbor Day play and other ideas for celebrating the Tree Planters Holiday.

An Arbor Day celebration is one of the four standards for a community to be named as a Tree City USA. For information about urban and community forestry, and Tree City USA, contact The National Arbor Day Foundation or your state forester.



Free Trees 'or Planting

You can participate in the Trees For America campaign by joining The National Arbor Day Foundation. By planting the ten free Colorado Blue Spruces which you will receive with your membership you will make a personal contribution to fighting the Greenhouse Effect...add to the value of your home...provide a home for songbirds...and beautify your neighborhood and community.

Your trees, each six to twelve inches, will be shipped postage paid at the right time for planting — between February 1 and May 31 in the spring, or between September 1 and November 15 in the fall. People in southern coastal and west coast states will receive other conifers selected for your climate.

The Arbor Day Foundation is a nonprofit organization dedicated to tree planting and conservation. You will be joining more than 800,000 Americans who are supporting the Foundation's stewardship education programs in schools, communities and farms throughout the nation.

In addition to your free trees, you will receive valuable information about tree care in your subscription to the Foundation's official bi-monthly publication, "Arbor Day," member discounts on the purchase of trees, and a copy of The Tree Book.

Join today, and plant your TREES for AMERICA!

☐ **Yes, I'll plant Trees For America!** Please send my 10 free Colorado Blue Spruces at the right time for planting. My \$10 membership contribution is enclosed.

Name _____

Address _____

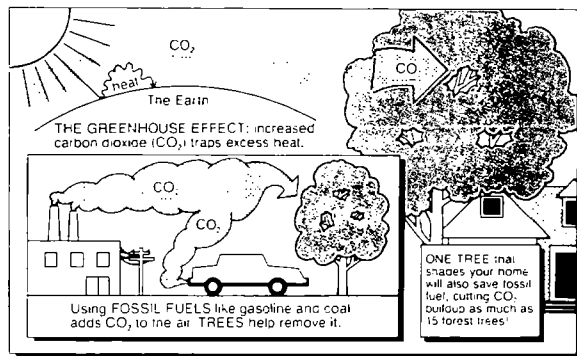
City _____

State _____ Zip _____

Mail to: National Arbor Day Foundation, 100 Arbor Avenue, Nebraska City, Nebraska 68410.



Plant TREES for AMERICA



The trees you plant will help fight the Greenhouse Effect. In addition, trees have a transforming affect upon our cities and the countryside:

A World WITHOUT Trees



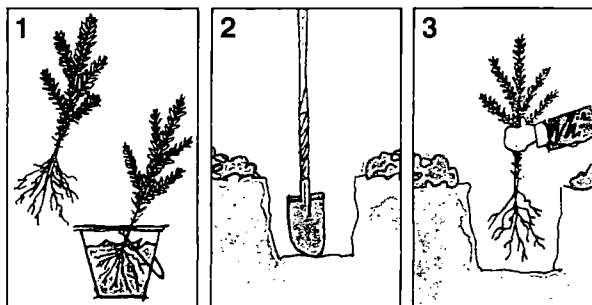
Blowing Unprotected Silty, Flood- Sun-Baked Rapid Gullied
Soil Farmsteads Prone Rivers Cities Runoff Farmland

A World WITH Trees



Protected Sheltered Natural Shaded Homes Forested Productive
Fields Farmsteads Streams and Streets Slopes Farmland

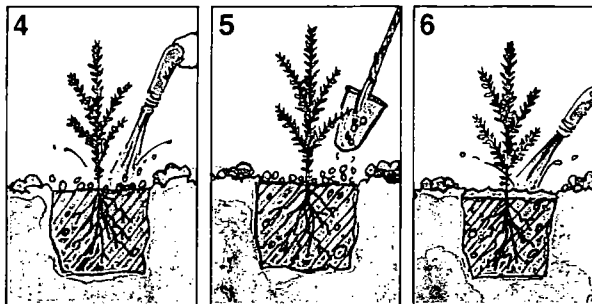
I ow' 'o Plan a Tree



1 Unpack tree and soak in water 6-12 hours. Do not plant with packing material attached to roots and do not allow roots to dry out.

2 Dig a hole, wider than seems necessary, so the roots can spread without crowding. Remove any grass within a three-foot circular area.

3 Plant the tree as deep as it stood in the nursery without crowding the roots. Partially fill the hole and pack the soil firmly around the lower roots.



4 Shove in the remaining soil and pack firmly with heel. Construct a water-holding basin around the tree. Give the tree plenty of water.

5 Pour protective mulch, such as wood chips or peat moss, around the base after water has soaked in.

6 Water the tree generously every week or 10 days the first year. Fertilize soon after spring growth.

Immediate Tree Care: It is best to plant your trees immediately. If you can't because of weather or soil conditions, store in a cool place with damp moisture-holding material covering the roots. Do not freeze.

Where to Plant: Consider how big your trees will grow. Avoid planting under or near overhead utility lines or too close to buildings.

Mulch: A Tree's Best Friend

Mulch surrounding a tree when it's planted, or covering all or a portion of a tree's dripline zone when it grows, can significantly enhance growing conditions.

- Mulch such as bark or wood chips...
 - Retains soil moisture
 - Controls weeds and grass
 - Protects the trunk from mowers
 - Improves appearance
 - Controls erosion
 - Simplifies maintenance
 - Reduces soil compaction



Trees for America™



"Join me
and plant
a tree"

John Denver for
The National Arbor Day Foundation

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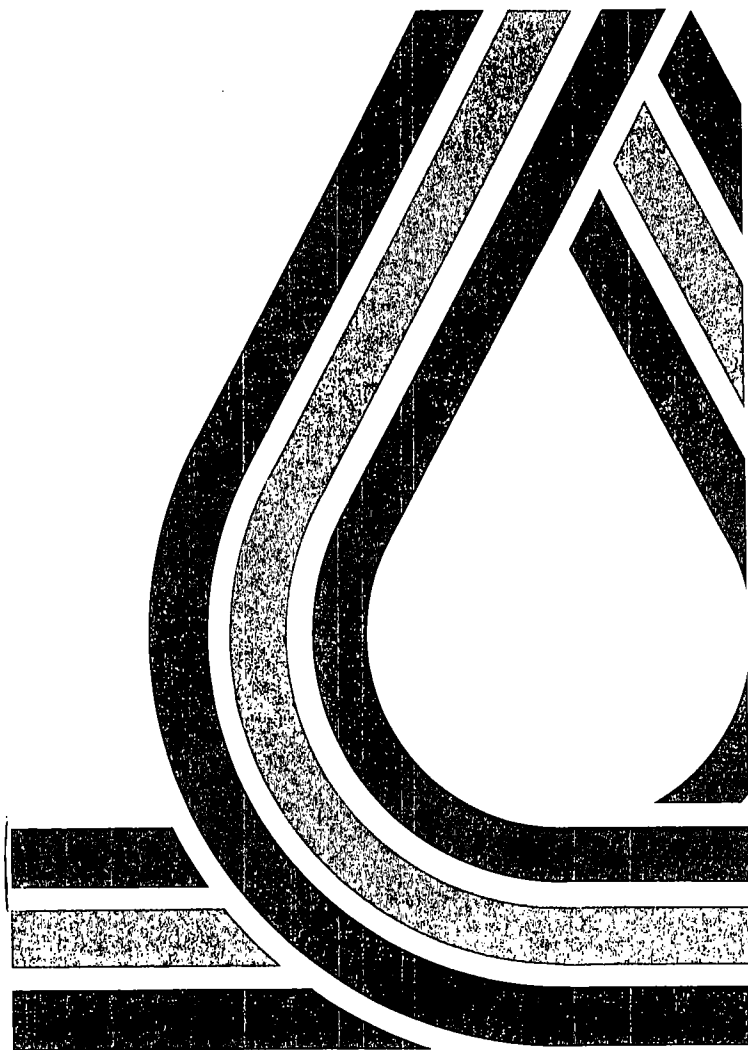
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United States Department of Agriculture

Soil Conservation Service

Program Aid Number 1352

Assistance Available from the Soil Conservation Service



The Earth Team
7515 N.E. Ankeny Road
Ankeny, Iowa 50021-9764

**Here's The 1-800-The-Soil
Information You Requested**

Thank you for calling 1-800 THE SOIL and for your concern about soil and water. The future growth and well-being of America depends, in large part, on how well we conserve our natural resources today. This packet contains an overview of conservation facts and tips on how you can make a difference around your home or on your land.

Also included is information on the Earth Team, the volunteer arm of the USDA Soil Conservation Service. You can join the thousands of Americans who have already become Earth Team volunteers and who work to improve the condition of the soil and water resources where they live. These volunteers work to reduce soil erosion, conserve water, improve water quality, and build community pride.

Earth Team volunteers carry out their commitment with action . . . and feel the satisfaction their efforts bring. We invite you to put your conservation commitment to work. We owe it to our children.

This packet was produced cooperatively by America's local soil and water conservation districts, the Soil and Water Conservation Society, and the USDA Soil Conservation Service. For more information, write to: Public Information Division, USDA Soil Conservation Service, P.O. Box 2890, Washington, DC 20013.

All programs and services of the Soil Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

Conserve Your Soil

Practice Water Conservation

Improve Water Quality

Develop a Conservation Plan

Learn About Soil

Take Pride in America

Take Pride in America is a way of looking at the environment we call home — where we work and play, where we go to school, and where we raise our families. TPIA is a perception of our neighborhood and our Nation . . . and how that perception translates into action.

Visit your local office of the Soil Conservation Service and share your ideas or ask for guidance in planning a TPIA project. You may want to plant trees or grass to stop soil erosion, plant shrubs for wildlife, stabilize a shoreline, or conserve a natural area.

You are invited to . . .

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United States
Department of
Agriculture

Soil
Conservation
Service

Program Aid
No. 1451



The Earth Needs You— Join Our Team

Volunteers for Soil and Water Conservation



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America The Beautiful National Tree Program

Questions and Answers About Trees

What is the America The Beautiful National Tree Program?

In 1990, President Bush proposed a major new initiative to provide an environmental legacy for future generations, enhance existing natural and recreational resources, and address mounting public concerns about the buildup of atmospheric carbon dioxide. That initiative—called America the Beautiful—began in fiscal year 1991. A major component of the initiative was the National Tree Program, a nationwide multiyear program of tree planting and care and forest improvement. This program calls for a public and private sector cooperative approach with a goal of planting, improving, and maintaining nearly 1 billion additional trees per year in communities and rural areas nationwide. Virtually every State, community, and individual in the Nation can contribute to this program through individual and collective tree planting and care efforts.

What are the key elements of the America The Beautiful National Tree Program?

The National Tree Program of America The Beautiful contains both rural and community tree components. The rural tree component is designed to address the tree planting and forest improvement needs on private lands in the United States through a combination of

technical assistance and cost shares for private landowners. The community tree component, designed to address tree planting and care, and retention of tree and forest cover in the Nation's cities, towns, and communities, will expand technical assistance by the Forest Service and State forestry agencies to municipal governments and volunteer groups. The program also established a national foundation to create public awareness of the need for tree planting and care, to foster private and public partnerships and volunteerism, and to raise funds in support of local tree planting endeavors.

Why is so much emphasis being placed on planting and caring for trees?

Trees provide a variety of economic, social, and environmental benefits to society. Trees, because of their long lifespans and multiple values, are a legacy we can provide future generations. Planting and caring for trees are positive actions that every individual can personally take to make a direct contribution to the quality of the environment now and for the future. Tree planting and care can revive the American spirit of personal empowerment and enable us to improve our world through individual action. They epitomize the challenge of thinking globally and acting locally.

State Forester Directory

State Forestry Agencies
Cooperating with the
United States
Department of Agriculture
Forest Service In
Administration of
Cooperative Forestry
Programs

United States
Department
Agriculture

Forest
Service



OFFICE ADMINISTERING PROGRAM	OFFICE ADMINISTERING PROGRAM	OFFICE ADMINISTERING PROGRAM	OFFICE ADMINISTERING PROGRAM	OFFICE ADMINISTERING PROGRAM
C. W. Moody State Forester Alabama Forestry Commission 513 Madison Avenue Montgomery, AL 36130 (205) 240-9304 DO: S.FORESTER:R08F01A TELEFAX: (205) 240-9300	James E. Hubbard State Forester Colorado State Forest Service 203 Forestry Building Colorado State University Fort Collins, CO 80523 (303) 491-6303 SECRETARY: B. Berg TELEMAIL: SF.CO:R02A TELEFAX: (303) 491-7738	John W. Mixon Director Georgia Forestry Commission P.O. Box 819 Macon, GA 31206-4599 (912) 744-3237 DO: SF.GA:S29L02A TELEFAX: (912) 744-3270	Burnell Fletcher State Forester Department of Natural Resources Division of Forestry 402 W. Washington Street, Rm. 266 Indianapolis, IN 46204 (317) 232-4108 DO: S.IN:S24A TELEFAX: (317) 233-3863	John H. Cashwell State Forester Department of Conservation Bureau of Forestry State House Station #22 Augusta, ME 04333 (207) 269-2793 DO: S.ME:S24A TELEFAX: (207) 269-2400
Malcolm R. Dink, Jr. State Forester Division of Forestry P.O. 107005 Anchorage, AK 99510-7005 (7) 762-2117 DO: S.AK:R10F04A TELEFAX: (907) 561-8858	Peter Babcock State Forester Division of Forestry Department of Environmental Protection 185 Capitol Avenue Hartford, CT 06108 (203) 568-5348 DO: S.CT:S24A TELEFAX: (203) 568-8024	Carlos L.T. Noquez Chief Forestry & Soil Resources Division P.O. Box 2950 Agana, GU 96910 (871) 734-3948 TELEMAIL: SF.GU TELEFAX: (871) 734-8570	William Farris State Forester, Supervisor Division of Forestry Iowa Department of Natural Resources Wallace State Office Building Des Moines, IA 50319 (515) 281-8858 DO: S.IA:S24A TELEFAX: (515) 281-8888	Gerald A. Rose Director Division of Forestry 500 Lafayette Road St. Paul, MN 55155-4044 (612) 298-4484 DO: S.MN:S24A TELEFAX: (612) 298-5954
T. Michael Hart Director, Forestry Division State Land Department 1616 W. Adams Phoenix, AZ 85007 542-2515 DO: T.HART:R03F12A TELEFAX: (602) 542-2580	Robert L. Tjeden, Jr. Adm/State Forester State of Delaware Department of Agriculture 2320 South Dupont Highway Dover, DE 19901 (302) 739-4811 DO: S.DE:S24A TELEFAX: (302) 697-8287	Michael Buck Administrator Division of Forestry and Wildlife 1151 Punchbowl Street Honolulu, HI 96813 (808) 587-0166 DO: M.BUCK:R05E TELEFAX: (808) 587-0180	Raymond Aelin State Forester State and Extension Forestry 2610 Claflin Road Manhattan, KS 66502-2798 (913) 837-7050 SECRETARY: S.Zimmer TELEMAIL: SF.KS:R02A TELEFAX: (913) 839-9584	James L. Sledge, Jr. State Forester Mississippi Forestry Commission 318 North Lamar Jackson, MS 39201 (601) 359-1368 DO: S.FORESTER:R08F07A TELEFAX: (601) 359-1349
Edwin E. Waddell State Forester Arkansas Forestry Commission P.O. Box 4523-Asher Station Little Rock, AR 72214 (501) 684-2531 DO: SF.AR:R08F10A TELEFAX: (501) 324-8086	L. Earl Peterson State Forester Division of Forestry 3125 Conner Boulevard Tallahassee, FL 32399-1650 (904) 488-4274 DO: S.FORESTER:R08F05A TELEFAX: (904) 488-0883	Stanley F. Hamilton Director Idaho Department of Lands 1215 W. State Street Boise, ID 83720-7000 (208) 334-0200 DO: S.FORESTER:R04F02A TELEFAX: (208) 334-2339	Donald H. Harman Director Kentucky Division of Forestry 627 Comanche Trail Frankfort, KY 40601 (502) 564-4496 DO: S.FORESTER:R08F02A TELEFAX: (502) 564-6553	Gerald Rose State Forester Missouri Dept. of Conservation 2901 West Truman Blvd. P.O. Box 180 Jefferson City, MO 65102 Tele. (314) 751-4115 DO: S.MO:S24A TELEFAX: (314) 883-8078
Richard Wilson Director Department of Forestry & Fire Protection Resources Building P.O. Box 944246 Sacramento, CA 94244-2460 (916) 653-7772 TEI : SF.CA TELEFAX: (916) 327-7744		State Forester Division of Forests Resources 600 North Grand Avenue West Springfield, IL 62708 (217) 782-2381 DO: S.IL:S24A TELEFAX: (217) 785-8277	Paul D. Frey State Forester Assistant Commissioner Department of Agriculture Office of Forestry P.O. Box 1626 Baton Rouge, LA 70821 (504) 825-4500 DO: SF.LA:R08F08A TEI : LA	Gary O. Brown State Forester and Administrator Forestry Division Department of State Lands 2705 Spurgin Road Missoula, MT 59801 (406) 542-4300 DO: G.BROWN:R01A TELEFAX: (406) 542-4217
				Dr. Gerald J. Thiede (Jerry) Chief and State Forester Forest Management Division Michigan Department of Natural Resources Stevens T. Mason Building Box 30026 Lansing, MI 48909 Tele. (517) 373-1275 DO: S.MI:S24A TELEFAX: (517) 373
				Dr. Gary L. Hergenroder Head and State Forester Department of Forestry, Fisheries & Wildlife Rm. 101, Plant Industries Bldg. Lincoln, NE 68583-0894 (402) 472-1487 SECRETARY: A. Bruha TEI : SF.NE:F TELEFAX: 472-1487

**OFFICE ADMINISTERING
PROGRAM**

Lowell V. Smith
State Forester
Division of Forestry
123 West Nye Lane
Carson City, NV 89710
(702) 687-4353
DQ: L.SMITH:R04F17A
TELEFAX: (702) 687-4244

John E. Sargent
Director
Division of Forests and Lands
Box 856
172 Pembroke Road
Concord, NH 03302-0856
(603) 271-2214
DQ: S.NH:S24A
TELEFAX: (603) 271-2829

Robert Edmonds
Cooperative Forestry Programs
110 Pelee Hall
University of New Hampshire
Durham, NH 03824
(603) 862-1029

Olin D. White, Jr.
State Forester, Asst. Director
State Forestry
CN 404, 501 E. State Street
Station Plaza #5
Trenton, NJ 08625
(609) 984-3850
DQ: S.NJ:S24A
TELEFAX: (609) 984-0378

Raymond R. Gallegos
State Forester
Forestry & Resources Conservation
Division
P.O. Box 1948
Santa Fe, NM 87504-1948
(505) 827-5830
DQ: R.GALLEGOS:R03F10A
TELEFAX: (505) 827-3903

**OFFICE ADMINISTERING
PROGRAM**

Robert H. Bathrick
Director
Division of Lands & Forests
Dept. of Environmental
Conservation
60 Wolf Road
Albany, NY 12233-4280
(518) 457-2475
DQ: S.NY:S24A
TELEFAX: (518) 457-1088

Stan Adams
State Forester
Division of Forest Resources

P.O. Box 27687
Raleigh, NC 27611-7687
(919) 733-2162
DQ: SF.NC:S29L03A
TELEFAX: (919) 733-0138

Larry A. Kotchman
State Forester
Molberg Forestry Center
First and Brander
Bottineau, ND 58318
(701) 228-2277
DQ: L.KOTCHMAN:R01A
TELEFAX: (701) 228-2277 Ext. 248

Ronald Abraham
State Forester
Division of Forestry
Fountain Square
Columbus, OH 43224
(614) 285-6690
DQ: S.OH:S24A
TELEFAX: (614) 447-9231

Roger L. Davis
Director
Department of Agriculture
Forestry Services
2800 N. Lincoln Blvd.
Oklahoma City, OK 73105-4298
(405) 521-3864
DQ: SF.OK:R08F08A
TELEFAX: (405) 521-4912

**OFFICE ADMINISTERING
PROGRAM**

James E. Brown
State Forester
Oregon Department of Forestry
2800 State Street
Salem, OR 97310
(503) 378-2511
TELEMAIL: SF.OR@Telemail:X400
TELEFAX: (503) 383-6604

James Nelson
Director
Bureau of Forestry
P.O. Box 8552
Harrisburg, PA 17105-8552
(717) 787-2703
DQ: S.PA:S24A
TELEFAX: (717) 783-5109

Ricardo Colla
State Forester
Director of the Forest Service
Department of Natural Resources
P.O. Box 5887, Puerta de Tierra
San Juan, PR 00908
(809) 724-3647
DQ: SF.PR:R06F16A
TELEFAX: (809) 721-5984

Thomas A. Dupree
State Forester
Division of Forest Environment
1037 Hartford Pike
North Scituate, RI 02857
(401) 647-3367
DQ: S.RI:S24A
TELEFAX: (401) 647-3590

**OFFICE ADMINISTERING
PROGRAM**

Robert J. (Jack) Gould
State Forester
South Carolina Forestry
Commission
P.O. Box 21707
Columbia, SC 29221
(803) 737-8800
DQ: S.FORESTER:R08F12A
TELEFAX: (803) 798-8097

Frank Davis
State Forester/Director
Division of Forestry
Sigurd Anderson Building
445 East Capitol
Pierre, SD 57501-3188
(605) 773-3623
SECRETARY: E.Barth
TELEMAIL: SF.SD:R02A
TELEFAX: (605) 773-5928

Roy C. Ashley
State Forester
Tennessee Department of
Agriculture
Division of Forestry
701 Broadway
Nashville, TN 37243-0444
(615) 742-8818
DQ: SF.TN:R08F04A
TELEFAX: (615) 742-6594

Bruce R. Miles
Director
Texas Forest Service
College Station, TX 77843-2138
(409) 845-2841
DQ: S.FORESTER:R08F13A
TELEFAX: (409) 845-8764

Richard P. Kason
State Forester
Division of State Lands and
Forestry
3 Triad Center, Suite 400
355 West North Temple
Salt Lake City, UT 84180-1204
(801) 538-5508
TELEMAIL: SF.UT
TELEFAX: (801)

**OFFICE ADMINISTERING
PROGRAM**

Conrad M. Motyka
Commissioner
Department of Forests, Parks &
Recreation
103 S. Main Street
Waterbury, VT 05671-0801
(802) 244-8714
DQ: S.VT:S24A
TELEFAX: (802) 244-1481

James W. Garner
State Forester
Virginia Department of Forestry
P.O. Box 3758
Charlottesville, VA 22903
(804) 977-6555
DQ: SF.VA:R08F08D01A
TELEFAX: (804) 296-2369

Eric L. Bough
Assistant Commissioner
King Field Post Office
St. Croix, VI 00851
(809) 778-0997, Ext. 18
TELEMAIL: SF.VI
TELEFAX: (809) 778-3101

James A. "Art" Stearns
Supervisor
Department of Natural Resources
201 John A. Cherberg Building
Mail Stop QW-21
Olympia, WA 98504-7201
(206) 753-5331
TELEMAIL: SF.WA@Telemail:X400
TELEFAX: (206) 664-9639

William Gillespie
Administrative Forester
Department of Commerce Labor
Environmental Resources
Forestry Division
State Capitol
Charleston, WV 25305
(304) 348-2788 or 3274
DQ: S.WV:S24A

**OFFICE ADMINISTERING
PROGRAM**

Ralph Glover
Deputy Administrative Forester
Department of Commerce Labor
Environmental Resources
Forestry Division
State Capitol
Charleston, WV 25305
(304) 348-2788 or 3274
TELEMAIL: SF.WV
TELEFAX: (304) 348-0143

Charles E. Higgs
Director, State Forester

Bureau of Forestry, Division
of Resource Management
P.O. Box 7921
Madison, WI 53707
(608) 266-0642
DQ: S.WI:S24A
TELEFAX: (608) 266-8578

Bryce E. Lundell
State Forester
Wyoming State Forestry Division
1100 West 22nd Street
Cheyenne, WY 82002
(307) 777-7586
SECRETARY: S.Hoadley
TELEMAIL: SF.WY:R02A
TELEFAX: (307) 637-8728

Eastern Region 310 West Wisconsin Ave. Milwaukee, WI 53203			Southern Region 1720 Peachtree Rd., NW. Atlanta, GA 30367			Southern Region (continued)		
Illinois			Alabama			North Carolina		
Shawnee	Harrisburg	62946	<i>National Forests in Alabama¹</i>			<i>National Forests in North Carolina¹</i>		
Indiana and Ohio			William B. Bankhead	Montgomery	36107	Croatan	Asheville	28802
Wayne-Hoosier ¹	Bedford	47421	Conecuh			Nantahala		
Michigan			Talladega			Pisgah		
Hiawatha	Escanaba	49829	Tuskegee			Uwharrie		
Huron-Manistee ¹	Cadillac	49601	Arkansas			Puerto Rico		
Ottawa	Ironwood	49938	Ouachita	Hot Springs	71901	Caribbean	Rio Piedras	00928
Minnesota			Ozark-St. Francis ¹	Russellville	72801	South Carolina		
Chippewa	Cass Lake	56633	Florida			Francis Marion and Sumter ¹	Columbia	29202
Superior	Duluth	55801	<i>National Forests in Florida¹</i>			Tennessee		
Missouri			Apalachicola	Tallahassee	32308	Cherokee	Cleveland	37311
Mark Twain	Rolla	65401	Ocala			Texas		
New Hampshire and Maine			Osceola			<i>National Forests in Texas¹</i>		
White Mountain	Laconia	03247	Georgia			Angelina	Lufkin	75901
Pennsylvania			Chattahoochee and Oconee ¹	Gainesville	30501	Davy Crockett		
Allegheny	Warren	16365	Kentucky			Sabine		
Vermont			Daniel Boone	Winchester	40391	Sam Houston		
Green Mountain and Finger Lakes	Rutland	05701	Louisiana			Virginia		
West Virginia			Kisatchie	Pineville	71360	George Washington	Harrisonburg	22801
Monongahela	Elkins	26241	Mississippi			Jefferson	Roanoke	24001
Wisconsin			<i>National Forests in Mississippi¹</i>					
Chequamegon	Park Falls	54552	Bienville	Jackson	39269	Alaska Region		
Nicolet	Rhineland	54501	Delta			Federal Office Bldg.		
			De Soto			P.O. Box 1628		
			Holly Springs			Juneau, AK 99802		
			Homochitto					
			Tombigbee			Alaska		
						Chugach	Anchorage	99501
						Tongass-Chatham	Sitka	99835
						Tongass-Ketchikan	Ketchikan	99901
						Tongass-Stikine	Petersburg	99833

RESEARCH HEADQUARTERS AND STATE AND PRIVATE FORESTRY

Intermountain Forest and Range Experiment Station 507 25th St., Ogden, UT 84401	Pacific Southwest Forest and Range Experiment Station 1960 Addison St., Berkeley, CA 94704	Forest Products Laboratory One Gifford Pinchot Dr. Madison, WI 53705-2398
North Central Forest Experiment Station 1992 Folwell Ave., St. Paul, MN 55108	Rocky Mountain Forest and Range Experiment Station 240 West Prospect Ave., Fort Collins, CO 80526	
Northeastern Forest Experiment Station 370 Reed Rd., Broomall, PA 19008	Southeastern Forest Experiment Station 200 Weaver Blvd., P.O. Box 2680, Asheville, NC 28802	
Pacific Northwest Forest and Range Experiment Station P.O. Box 3890, Portland, OR 97208	Southern Forest Experiment Station T-10210 U.S. Postal Service Bldg., 701 Loyola Ave., New Orleans, LA 70113	Northeastern Area—S&PF 370 Reed Rd. Broomall, PA 19008

When writing to an Experiment Station, the Forest Products Laboratory, or the Northeastern S&PF Area, address your letter to the Director.

State and Private Forestry

State and Private Forestry offices are located in the Regional Headquarters, except for the Eastern Region. This S&PF office is at:

Fie d Offices of the Forest Service

United States Department of Agriculture



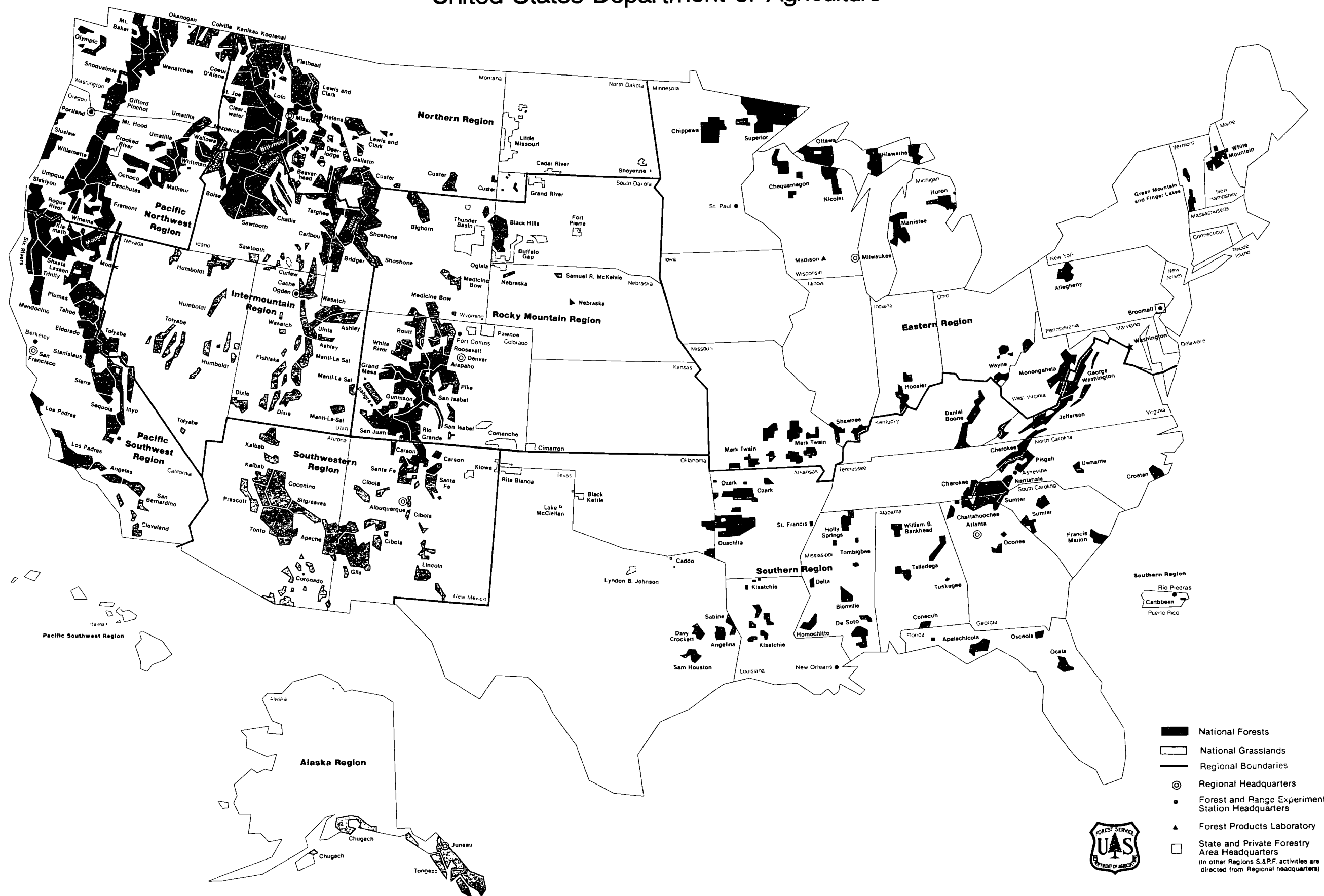
REGIONAL HEADQUARTERS AND NATIONAL FORESTS

National Forests are listed by Region and State. Locations of National Forest headquarters are shown in boldface opposite their names. When writing to a Region, address your letter to the Regional Forester. When writing to a National Forest, address your letter to the Forest Supervisor.

Northern Region Federal Bldg. P.O. Box 7669 Missoula, MT 59807			Southwestern Region Federal Bldg. 517 Gold Ave. SW. Albuquerque, NM 87102			Pacific Southwest Region 630 Sansome St. San Francisco, CA 94111		
Idaho			Arizona			California		
Clearwater	Orofino	83544	Apache-Sitgreaves ¹	Springerville	85938	Angeles	Arcadia	91006
<i>Idaho Panhandle National Forests¹</i>			Coconino	Flagstaff	86004	Cleveland	San Diego	92188
Coeur d'Alene	Coeur d'Alene	83814	Coronado	Tucson	85701	Eldorado	Placerville	95667
Kaniksu			Kaibab	Williams	86046	Inyo	Bishop	93514
St Joe			Prescott	Prescott	86303	Klamath	Yreka	96097
Nezperce	Grangeville	83530	Tonto	Phoenix	85010	Lassen	Susanville	96130
			New Mexico			Los Padres	Goleta	93117
Montana			Carson	Taos	87571	Mendocino	Willows	95988
Beaverhead	Dillon	59725	Cibola	Albuquerque	87112	Modoc	Alturas	96101
Bitterroot	Hamilton	59840	Gila	Silver City	88061	Plumas	Quincy	95971
Custer	Billings	59103	Lincoln	Alamogordo	88310	San Bernardino	San Bernardino	92408
Deerlodge	Butte	59703	Santa Fe	Santa Fe	87504	Sequoia	Porterville	93257
Flathead	Kalispell	59901				Shasta-Trinity ¹	Redding	96001
Gallatin	Bozeman	59771				Sierra	Fresno	93721
Helena	Helena	59626				Six Rivers	Eureka	95501
Kootenai	Libby	59923				Stanislaus-Calaveras		
Lewis and Clark	Great Falls	59403				Big Tree ¹	Sonora	95370
Lolo	Missoula	59801				Tahoe	Nevada City	95959
Rocky Mountain Region 11177 West 8th Ave. P.O. Box 25127 Lakewood, CO 80225			Intermountain Region Federal Bldg. 324 25th St. Ogden, UT 84401			Pacific Northwest Region 319 SW Pine St. P.O. Box 3623 Portland, OR 97208		
Colorado			Idaho			Oregon		
Arapaho-Roosevelt ¹	Ft. Collins	80526	Boise	Boise	83702	Deschutes	Bend	97701
Grand Mesa, Uncompahgre, and Gunnison ¹	Delta	81416	Caribou	Pocatello	83201	Fremont	Lakeview	97630
Pike-San Isabel ¹	Pueblo	81008	Challis	Challis	83226	Malheur	John Day	97845
Rio Grande	Monte Vista	81144	Payette	McCall	83638	Mt. Hood	Gresham	97030
Routt	Steamboat Springs	80487	Salmon	Salmon	83467	Ochoco	Prineville	97754
San Juan	Durango	81301	Sawtooth	Twin Falls	83301	Rogue River	Medford	97501
White River	Glenwood Springs	81602	Targhee	St. Anthony	83445	Siskiyou	Grants Pass	97526
Nebraska			Nevada			Siuslaw	Corvallis	97339
Nebraska-Samuel R. McKelvie ¹	Chadron	69337	Humboldt	Elko	89801	Umatilla	Pendleton	97801
			Toiyabe	Sparks	89431	Umpqua	Roseburg	97470
South Dakota			Utah			Wallowa-Whitman ¹	Baker	97814
Black Hills	Custer	57730	Ashley	Vernal	84078	Willamette	Eugene	97440
Wyoming			Dixie	Cedar City	84720	Winema	Klamath Falls	97601
Bighorn	Sheridan	82801	Fishlake	Richfield	84701	Washington		
Medicine Bow	Laramie	82070	Manti-LaSal	Price	84501	Colville	Colville	99114
Shoshone	Cody	82414	Uinta	Provo	84603	Gifford Pinchot	Vancouver	98660
			Wasatch-Cache ¹	Salt Lake City	84138	Mt. Baker-Snoqualmie ¹	Seattle	98104
			Wyoming			Okanogan	Okanogan	98840
			Bridger-Teton ¹	Jackson	83001	Olympic	Olympia	98507
						Wenatchee	Wenatchee	98801

¹Two or more separately proclaimed National Forests under one supervisor.

The Forest Service
United States Department of Agriculture



- National Forests
- ▨ National Grasslands
- Regional Boundaries
- ⊙ Regional Headquarters
- Forest and Range Experiment Station Headquarters
- ▲ Forest Products Laboratory
- State and Private Forestry Area Headquarters
(In other Regions S.&P.F. activities are directed from Regional headquarters)





NATIONAL COUNCIL OF CATHOLIC WOMEN

1275 K Street, N.W., Suite 975, Washington, DC 20005

(202) 682-0334

Fax (202) 682-0338

Since 1920 serving church and society through women's organizations

Dear Affiliate:

As we were putting together this information packet to tell you about our new NCCW program, ***The Earth: In Our Hands***, reports about newly detected holes in the ozone layer were making headlines across the country. It was sad confirmation that concern for our environment must move toward action to save it - while that is still possible.

The Earth: In Our Hands is NCCW's response to an issue that the U.S. bishops have called a "moral challenge" - protecting our environment through wise use of our natural resources. It seems fitting that we are mailing these packets in April the month that holds Arbor Day, Earth Day, and National Volunteers' Week as well as Soil and Water Stewardship Week.

Thanks to generous funding from a number of sources we are able to present this program which offers individuals and affiliates the opportunity to make a vital contribution toward caring for our environment through wise use of our natural resources.

The enclosed information packet will give you an overview and description of ***The Earth: In Our Hands***, plus particulars on how to get involved. We are pleased to note that a number of federal agencies and national organizations are working in partnership with us on this program and their resources will be available to you.

I hope you will accept this invitation to respond in a very personal way to the "moral challenge" that has been placed before us and pass the invitation on to your parish and community.

Sincerely,

Carroll Quinn
President



Carroll Quinn
President

Rita Greenwald
1st Vice President

Donna Tiernan Mahoney
2nd Vice President

Patricia Smuck
3rd Vice President

Joan McGrath
Secretary

Bertha Hunt
Treasurer

Annette P. Kane
Executive Director



Overview of *The Earth: In Our Hands*

In Genesis we are told that God made women and men stewards of His creation. That gives us both power and responsibility to protect what has been given into our care. Today, that creation - our environment - is in great need of wise stewardship.

The urgency of the situation has been recognized and addressed by Church leaders worldwide. Pope John Paul has declared that "the ecological crisis is a moral issue" and in a recent pastoral the U.S. Catholic Bishops go a step further by describing the environmental situation as a "moral challenge" that "calls us to examine how we use and share the goods of the earth."

Funding from a variety of sources listed below has allowed the National Council of Catholic Women to respond to that challenge by instituting a new program, ***The Earth: In Our Hands***. With the funding and a Memorandum of Understanding signed last fall with U.S. Department of Agriculture's Soil Conservation Service (SCS) and Forest Service (FS), NCCW is working toward the goals of increased public awareness of conservation issues and action to define and deal with environmental issues at the local level.

The Earth: In Our Hands is an ongoing, hands-on opportunity for local affiliates to become actively involved in meeting the moral challenge of caring for the environment starting in their own communities. The possibilities for projects that might be undertaken include: community events such as Earth Day, tree planting projects, fish and wildlife habitat protection and improvement, volunteering to work with the partnership agencies, or putting together environmental awareness programs for children. The affiliate doing the most outstanding work will be honored with an award at the NCCW biennial convention.

Concern for the environment is not something born of 20th century technology and consumption. It has its roots in Old Testament laws set out for God's chosen people. In Leviticus 25, the Jews are instructed to let the land lie fallow every seventh year so that the balance of nature can be restored by human restraint. The people did not obey and the land was exhausted. Care for the environment requires wise use of our natural resources.

Each generation from Adam and Eve has inherited the privilege and responsibility of stewardship over God's creation. Each generation has responded in its own way. The responsibility of protecting our environment - God's creation - has now become a "moral challenge." Will you accept that challenge?

***The Earth: In Our Hands* Environmental Stewardship Award**

NCCW has established an Environmental Stewardship Award as part of ***The Earth: In Our Hands***. National recognition will be given at NCCW's biennial convention to the affiliate performing the most outstanding work in natural resource conservation over the preceding two years.

A form is included in this packet for reporting on your project. To be considered for the award, it should be mailed by June 1 of a convention year to:

NCCW Program Director
1275 K St. NW #975
Washington, DC 20005

The submission date for the first national award will be June 1, 1993.

Judging will be based on three criteria:

1. The awareness of affiliate members and others in the community of resource issues in their local area. Meetings and other educational events should be documented and include a list of all parties involved.
2. Identification of local resource issues - Following the education phase, affiliates will then choose an issue for concentration in the action phase of the program. The affiliate should detail how the choice was made and how members prepared to move ahead with the action phase.
3. Awareness and action - The affiliate will be judged on how well it carried out the activity defined by the group, what results were seen and what level of involvement was accomplished with individuals and groups within the parish and community. Show what difference your efforts made.

Funding for ***The Earth: In Our Hands*** has been provided by:

National Fish and Wildlife Foundation
National Catholic Rural Life Conference
North American Conference on Christianity and Ecology
Associates of NCCW, Inc.
Archdiocese of St. Paul and Minneapolis, Most Reverend John R. Roach, D.D.
Diocese of Baton Rouge, Most Reverend Stanley T. Ott, S.T.D.
Diocese of Youngstown, Most Reverend James W. Malone, D.D.
Diocese of Shreveport, Most Reverend William B. Friend, D.D.
Margaret Harris
Margaret Mealey

NCCW extends sincere appreciation for their assistance.

***The Earth: In Our Hands* information packet includes:**

- ➡ Lists of contacts in the FS and the SCS
- ➡ Partial list of organizations and agencies involved in natural resource issues
- ➡ Ideas and suggestions for action including a list of 44 environmental suggestions to help communities
- ➡ Fact sheets and brochures from participating organizations
- ➡ Outline of the procedure and criteria for program award to be presented at the NCCW biennial convention

***The Earth: In Our Hands* objectives are:**

- ➡ Increasing awareness and understanding by NCCW affiliates and other community members of natural resource issues in their local area.
- ➡ Promoting a stronger land ethic and stewardship in the public and private sector.
- ➡ Learning what volunteer organizations can do to enhance the efforts of federal agencies and other organizations in managing and conserving resources.
- ➡ Developing specific community action programs and activities involving NCCW members, the partnership groups, and other interested community organizations to increase the awareness of and commitment to the need for conservation of natural resources at the local level.

***The Earth: In Our Hands* program outline:**

This natural resource program involves two phases: education and action. The initial focus will be on educating NCCW members. This program packet will provide basic information and guidance for getting started. NCCW members and other interested persons can then meet with local SCS or FS employees as well as other natural resource professionals to learn more about the specific issues facing their community.

Information resources are available from project partners and other organizations listed in the packet. You can write to the National Catholic Rural Life Conference (NCRLC) or the North American Conference on Christianity and Ecology (NACCE). Education resources and assistance are available from SCS and FS. (See list in packet for addresses.)

The second phase involves defining an action plan. NCCW affiliate members will determine what needs to be done in their community and begin environmental stewardship projects and programs. A wide range of local projects are possible. These include: local advocacy efforts, community education campaigns, recycling initiatives and volunteer work on specific agency projects.

Project possibilities are endless. For starters you will find in this packet a list of 44 specific suggestions for environmental improvements you can accomplish in your community. Beyond that the only limits are set by your own imagination.

THE EARTH: IN OUR HANDS
APPLICATION FORM:
ENVIRONMENTAL STEWARDSHIP AWARD



(Use additional paper if necessary.)

Organization _____

Diocese _____

Contact Person _____

Address _____

Phone _____

1. List the partnership agencies (NCRL, NACCE, SCS, FS) and any other groups that were contacted.

2. List meetings you had with these organizations and what information or help you received from them.

3. What local conservation issues did you identify?

4. How did you decide on the action you undertook?

5. Describe your program or project.

6. Were you able to involve other parish or community groups?

7. What were the results of your program or project?

8. What did your group learn from undertaking the project?

Submit this form by June 1, 1993 to: NCCW Program Director, 1275 K St. NW #975, Washington, DC 20005.

RESOURCE ORGANIZATIONS AND AGENCIES (a partial list)

FEDERAL AGENCIES

*Soil Conservation Service, USDA
Farmers Home Administration, USDA
Extension Service, USDA
Agricultural Rehabilitation and
Conservation Service, USDA
*Forest Service, USDA
National Park Service, USDI
Bureau of Reclamation, USDI
Fish and Wildlife Service, USDI
Corps of Engineers
Tennessee Valley Authority
Bureau of Land Management, USDI
(Not all federal agencies will be in every community. Some will have representatives serving a larger area.)

STATE GOVERNMENT

State Department of Agriculture
Historic Preservation Office or
Historical Museum
Natural Resource Agency
Environmental Protection Agency
Forestry and/or Parks Administration
Fish and Wildlife Agency

COUNTY

County Planning
Landfill Office
Highway Department

CITY GOVERNMENT

Health Department
Planning Department
Parks and Recreation
Sewage Treatment Division

SPECIAL OFFICES

Soil and Water Conservation
(Natural Resources District)
Watershed Planning

PRIVATE

*National Catholic Rural Life
Conference
*North American Conference on
Christianity and Ecology
National Wildlife Federation
Izaak Walton League
Sierra Club
Audubon Society
American Forestry Association

Check your local phone directory for
additional resource agencies.

* current partners in *The Earth: In Our Hands*



Clinton Presidential Records Digital Records Marker

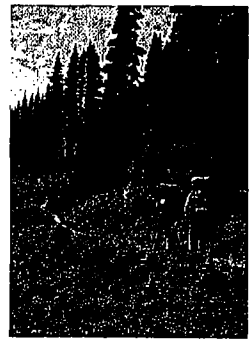
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United States Department of Agriculture
Forest Service

A Guide to Your National Forests



THE NATIONAL FORESTS

**America's
Great
Outdoors**

National Council of Catholic Women
1275 K Street, N.W., Suite 975
Washington, DC 20005
(202) 682-0334 FAX (202) 682-0338



NCCW PRINTED MATERIALS

10000	NCCW Brochure: "Together We Can Make A Difference" (minimum order 10 copies)	10-99 copies \$ 0.15
		100 or more copies 0.10
10008	Two-pocket "Together We Can Make A Difference" Presentation Folder	\$ 2.50
10001	NCCW Poster: 12"x 18" "Together We Can Make A Difference"	\$ 1.00
10004	Long-Range Plan Booklet: Single copy free; multiple copies up to 50 free with postage and handling fee	\$ 1.50
10005	NCCW "Wheel" Transparencies showing Council structure; use on overhead projector	\$ 3.00
10006	NCCW By-Laws	1-9 copies \$ 0.25
		10 or more copies \$ 0.15
10007	NCCW Resolutions	1-9 copies \$ 0.10
		10 or more copies \$ 0.05
50000	NCCW Membership Certificate Cards (min. order 25; max. 100; add postage)	\$ 0.05
10012	NCCW Prays: 100+ page soft cover booklet of prayer services	\$ 10.00
10013	CATHOLIC WOMAN NCCW's official bimonthly magazine.	1 year \$10.00
		2 years \$18.00
		3 years \$26.00
	Single copy as available:	
	current issue	\$ 2.00
	back issues	\$ 1.00

10014	Individual Membership in NCCW Includes subscription to Catholic Woman, membership button and card, and choice of one commission publication 3 times a year. Circle choice: CCC;CAC;FAC;LIC;IAC;OSC	\$ 15.00
10015	NCCW History Highlights	1-9 copies \$ 0.10
		10 or more copies \$ 0.05

50001	OLGC Prayer Card Prayer to Our Lady of Good Counsel and Prayer to the Holy Spirit	1-49 copies \$ 0.25
		50 or more \$ 0.15
50003	Our Mother of Good Counsel Note Cards Color print on cover, blank inside	\$ 0.50
50004	NCCW Note Cards Folded notes with OLGC line drawing; 6-5/8" x 5", matching envelope (min. order 10 @ \$4.00)	\$ 4.00
50005	NCCW Informals Folded note cards with NCCW imprint on front; 4-1/8" x 3-1/2", matching envelope (min. order 10 @ \$3.00)	\$ 3.00

VIDEO

10002	NCCW Video "Someday Begins Today" 1/2" VHS, 15 minutes	\$ 15.95
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COMMISSION PROGRAM MATERIALS

20000	NCCW Commission Outline Packet	1-9 copies \$ 3.00
		10 or more copies \$ 2.50
20001	Community Affairs Commission Kit	\$ 5.00
20002	Family Affairs Commission Kit	\$ 10.00
20003	International Affairs Commission Kit	\$ 5.00

20004	Church Communities Commission Kit	With binder \$ 15.00
		Without binder \$ 10.00
20005	Legislative Information Committee Kit	With binder \$ 15.00
		Without binder \$ 10.00
20006	Organization Services Commission Kit	With binder \$ 15.00
		Without binder \$ 10.00
30000	Respite Manual: How to start a RESPITE program	\$ 8.00
30001	Respite Video: "A Gift of Love" 1/2" VHS	Loan (postage included) \$ 8.00
		Purchase " " \$ 24.95
		Spanish script translation \$ 1.00
30002	Respite Brochures *General Information (Blue Tone) no charge postage	
30003	*Information for Caregivers (Rose Tone) no charge postage	
		*Spanish versions available; contact national office
30004	Anti-Pornography Kit "What One Woman Can Do" (revised 1990)	\$ 8.00
30005	NCCW Alcohol & Drug Education Brochures "Don't Face Alcohol and Drug Problems Alone" (min.order 10 copies)	\$ 0.10
30006	"The Earth: In Our Hands" Natural Resource Stewardship Program packet	5.00

LEADERSHIP PROGRAM MATERIALS

10009	NCCW Leadership Manual	Part I: "Discovering Our Gifts" With binder \$ 15.00
		Without binder \$ 10.00
10010	Part II: "Sharing Our Gifts"	With binder \$ 15.00
		Without binder \$ 10.00

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Cut Here

NCCW PUBLICATIONS AND PROGRAM AIDS ORDER FORM

SHIP TO:	BILL TO:
Name	Name
Organization	Organization
Street Address	Street Address
(Not P.O.Box)	(Not P.O.Box)
City	City
State	State
Zip	Zip
Daytime Telephone #	Daytime Telephone #
Date Needed	

Check enclosed in the amount of \$ Bill me

insure minimum wage and Social Security benefits for this category of women workers.

- **1965-1980:** NCCW with State Department and AID provides services to foreign students resident in the U.S. through the National Council for International Visitors and COSERV.
- **1966:** Radio Free Europe recognizes NCCW's support for and contribution to the cause of freedom for the Communist-ruled people of Eastern Europe.
- **1977:** NCCW recognized by the President's Committee on Employment of the Handicapped for its leadership and support and for more than a decade of service.
- **1979:** NCCW develops a Breast Cancer Education Program in conjunction with the National Cancer Institute.
- **1980:** NCCW participates at local, state and national levels in the White House Conference on Families.
- **1971-1981:** NCCW involved at local, state and national levels in the White House Conference on Aging.
- **1983-1989:** NCCW develops RESPITE, a program of volunteer care for the frail elderly to provide relief for family caregivers. By 1987 RESPITE is established in 80 dioceses and involves over 4,000 volunteers.
- **1984:** NCCW's RESPITE program receives awards from the Department of Health and Human Services and the National Council on Aging.
- **1986:** NCCW takes the lead in anti-pornography efforts across the U.S.
- **1987:** NCCW launches a program of drug and alcohol abuse education.
- **1988:** NCCW introduces a Long-Range Plan for implementation by its affiliates.
- **1990:** NCCW develops a public relations plan to increase grassroots awareness of Council work and activities.
- **1991:** In conjunction with the Soil Conservation Service and the Forest Service, NCCW introduces a program of awareness and action about wise use of natural resources.

NCCW's Mission Statement

The National Council of Catholic Women acts through its affiliated organizations to support, empower and educate all Catholic women in spirituality, leadership and service. NCCW programs respond with Gospel values to the needs of the Church and society in the modern world.

NATIONAL COUNCIL OF CATHOLIC WOMEN

*National Council of Catholic Women
1275 K Street, N.W., Suite 975
Washington, DC 20005
(202) 682-0334 FAX (202) 682-0338*

NATIONAL COUNCIL OF CATHOLIC WOMEN

NCCW is the nationwide federation in the United States of Catholic women and their organizations. It was founded by 200 concerned women in 1920 at the call of the bishops of the United States.

NCCW is composed of affiliated parish, subdivision, diocesan and state organizations; it is national organizations with vast individual memberships; it is archdiocesan and diocesan councils of Catholic women spanning the United States; it is millions of women working together through national program commissions which reflect current issues in the Church and society.

NCCW is related to the National Council of Catholic Bishops and to the United States Catholic Conference as an affiliated organization.

What it does

- Unites Catholic organizations and individual Catholic women in the United States
- Develops their leadership potential
- Provides a medium through which the Catholic women may speak and act upon matters of common interest
- Relates to other national and international organizations in the solution of present day problems

How it operates

The government of NCCW is its Biennial National Convention. Between conventions, NCCW is governed by the General Assembly, composed of the presidents of archdiocesan and diocesan councils and national organizations and the members of the NCCW Board of Directors.

Highlights of NCCW History

- 1920: Establishment of NCCW, a federation of women's organizations at the request of the Catholic bishops of the U.S. to unify the efforts of Catholic women in church, family and society and to broaden the scope of their service.
- 1926: NCCW affiliation and active participation with the World Union of Catholic Women's Organizations (WUCWO), an international organization of 30 million Catholic women in 73 countries.
- 1926: NCCW founds the National Catholic School of Social Service for graduate study for women - the only residence school of social service training in the U.S. NCSSS exists independently for 20 years until incorporated into Catholic University in 1947.

- 1935: Report at NCCW annual convention cites ongoing program of aid to immigrants.
- 1935-1937: Establishment of a Field Secretary for Youth to train volunteer members to work in settlement homes and youth centers.
- 1937: "Call to Youth" radio series on NBC sponsored by NCCW.
- 1941-1946: During World War II, NCCW active in National Women's Division of the U.S. Defense Bonds Drive and recognized by the U.S. Treasury for this effort. NCCW members participate in many voluntary organizations such as ARC, USO, Women's Voluntary Services, etc.
- 1946 to present: Foreign Relief Committee added to NCCW national committees to help children overseas who had survived the holocaust. First program is collection of clothing for distribution in Europe through Catholic Relief Services. As CRS programs extend from Europe to meet human need in other parts of the world, NCCW expands its concern, i.e., Operation Hong Kong to aid refugees in Hong Kong and Macau in 1955 and aid to Mother Teresa's clinics in orphanages in Korea begins as Help-a-Child in 1961. At this time, programs are given the overall title "Works of Peace."
- 1946 to present: Support for the United Nations' systems through educational efforts such as UN Seminars, speakers, articles, etc. NCCW maintains a NGO representative at the UN.
- 1951-1989: NCCW sponsors institutes throughout the U.S. to train women to develop their leadership potential in community and church service.
- 1961: NCCW works with the President's Commission on the Status of Women established by President Kennedy. NCCW represented at the signing of the "Equal Pay for Equal Work" in 1963.
- 1962-1963: NCCW honored by the National Safety Council for its work in the Citizens' Awards program and in traffic safety prevention.
- 1964: NCCW joins with the National Council of Jewish Women, the National Council of Negro Women, YWCA and Church Women United to fight poverty among unemployed young women. As a result, WICS (Women in Community Service) comes into being to recruit young women for the Job Corps.
- 1965: NCCW with NCJW, NCNW, CWU and the Women's Bureau of the Department of Labor form the National Committee on Household Employment to work for legislation to



THE NATIONAL COUNCIL OF CATHOLIC WOMEN

- federates 8,000 Catholic women's organizations in the U.S.
- provides volunteer respite services in over 80 dioceses to caregivers of the elderly
- sponsors annual leadership training institutes throughout the country
- affords its members opportunities for spiritual growth
- offers programs and resources for its annual observance of Drug and Alcohol Awareness Sunday
- funds projects in the developing world through donations to its Works of Peace programs
- cooperates in diocesan evangelization efforts
- speaks out on behalf of life issues
- advocates on behalf of women and children in state and national legislatures
- supports women in the varying circumstances of their lives.

NCCW's Mission Statement

The National Council of Catholic Women acts through its affiliated organizations to support, empower and educate all Catholic women in spirituality, leadership and service. NCCW programs respond with Gospel values to the needs of the Church and society in the modern world.

National Council of Catholic Women

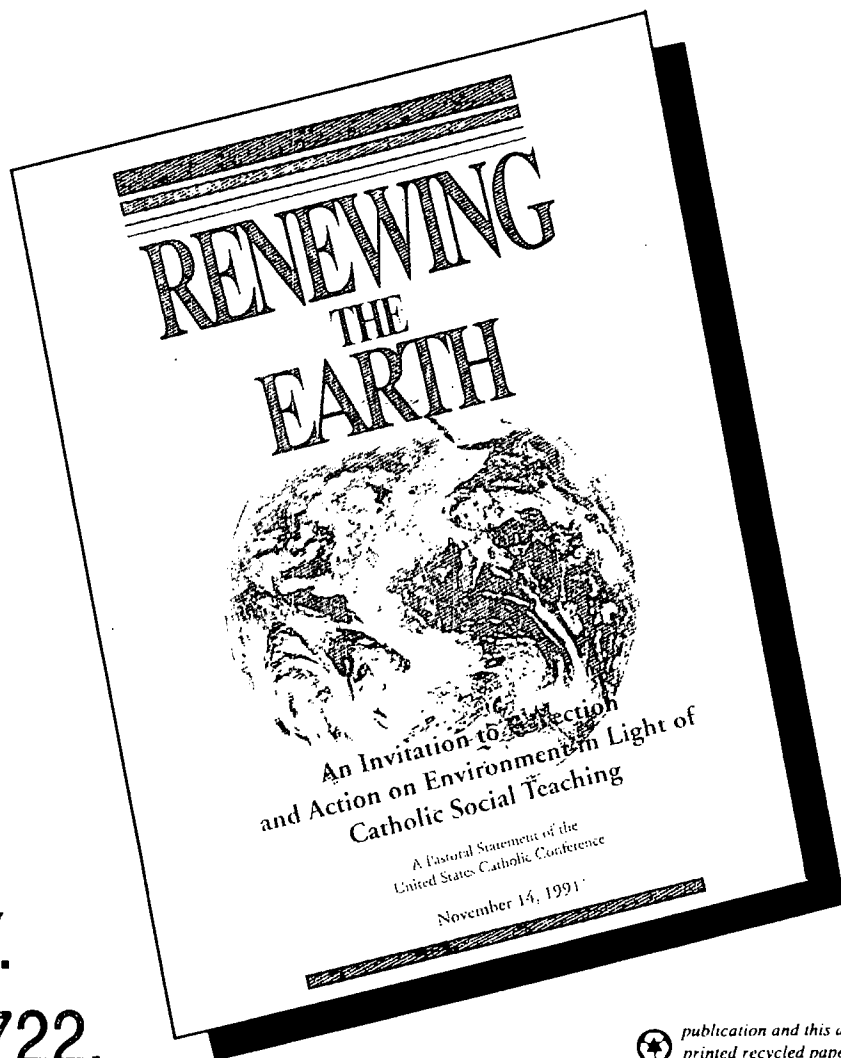
1275 K Street, N.W., Suite 975

Washington, D.C. 20005

(202) 682-0334

RENEWING THE EARTH

The United States bishops call on Catholics to reflect on and discuss environmental problems including: global warming, depletion of the ozone layer, deforestation and species extinction, and toxic and nuclear waste.



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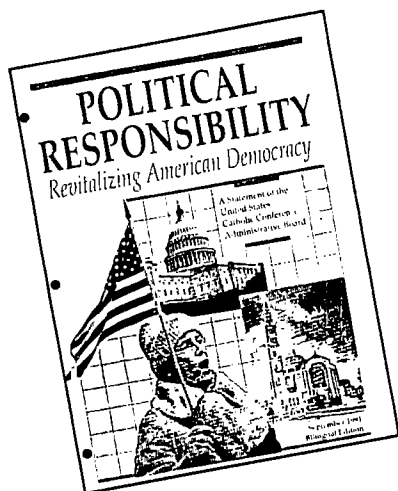
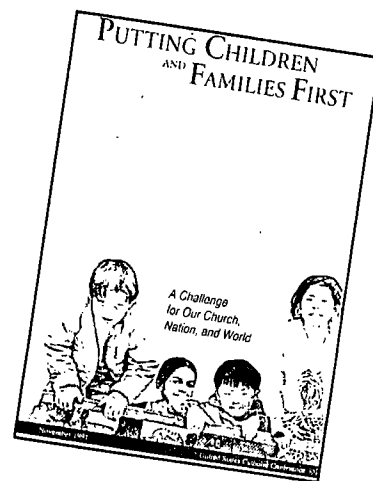
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PUTTING CHILDREN AND FAMILIES FIRST

A Challenge for Our Church, Nation, and World examines the needs of all children in an increasingly difficult world. Presents the moral and religious dimensions of caring for children. No. 469-4, 24 pp., \$1.95; 50/\$90; 100/\$165; 500/\$675; 1,000/\$1,200. No further discounts.



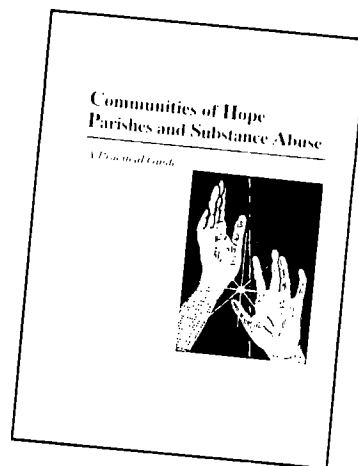
POLITICAL RESPONSIBILITY

Revitalizing American Democracy

The latest statement of the USCC Administrative Board advising the individual Catholic's role as a responsible citizen and voter, looking forward to the 1992 national and local elections. Includes the Church's position on issues such as capital punishment; the economy; education; euthanasia; family life; the environment; immigration; and the mass media. No. 467-8, 40 pp., bilingual (Span./Eng.) edition, \$1.95; 50/\$70; 100/\$130. No further discounts.

Communities of Hope *Parishes and Substance Abuse, A Practical Guide*

A practical companion document to the 1991 pastoral statement entitled *New Slavery, New Freedom*, which is included in this printing. No. 473-2, 24 pp., \$1.50; 25/\$33.75; 100/\$120; 500/\$520; 1,000/\$900. No further discounts.



Name _____

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	Putting Children and Families First	469-4	\$1.95	
	Communities of Hope	473-2	\$1.50	
See bulk discounts above for pricing, or call 1-800-235-8722 to order.				
Postage:			Subtotal _____	
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\$10.01-\$25.00 ... \$ 3.25				
\$25.01-\$50.00 ... \$ 4.25			GRAND TOTAL _____	

The National Catholic Rural Life Conference

A N N O U N C E S



Study Guides

on

Faith and the Environment

Renewing the Earth...

- ❖ is comprised of three separate study guides that have been designed for: children; teens; and adults. Teacher's guides accompany the children's and teens' study guides.
- ❖ study guides contain selections from the bishops' statement, *Renewing the Earth; An Invitation to Reflection and Action on the Environment and Catholic Social Teaching*, examples of key environmental issues, suggestions for action, and questions for group discussion.
- ❖ will be available (in bulk orders only) to teachers, pastors, social action and rural life directors, diocesan and parish leaders nationwide by April 15, 1992.

❖ ***The following is a price list for Renewing the Earth Study Guides:***

- 25-49 guides \$2.25 per guide
- 50-99 guides \$2.00 per guide
- 100 or more guides \$1.75 per guide

- ❖ • These costs do include postage and handling.
- A FREE teacher's guide will be included per every 25 guides ordered.
- Each additional teacher's guide ordered will cost \$2.00.

Name/Org. _____

Address _____

City _____ State _____ Zip _____

Amount Enclosed \$ _____

Number and kind of guides ordered _____

*Please make checks payable to and send order form to:
The National Catholic Rural Life Conference
4625 Beaver Ave. Des Moines, Iowa 50310*

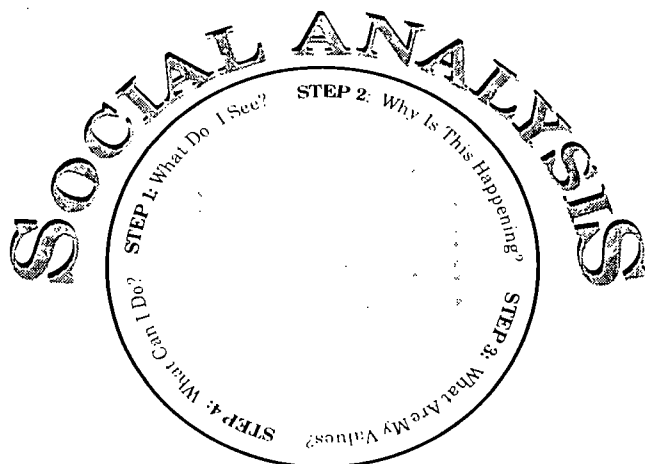
**For those who are serious about
environmental education...**



Study Guides

On Faith and the Environment

*Based on the pastoral statement, **Renewing the Earth**, the guides have been designed for three separate audiences: children, teens and adults. Each guide contains the following sessions:*



A 4-Step Process for Viewing the Environment





The North American Conference on Christianity and Ecology

An Abbreviated Statement of Vision and Purpose

The NACCE is an ecumenical organization whose purpose is to encourage ecological concern within the Christian tradition. We have served churches since 1985 and provided literature, resources and assistance to thousands.

Creation's Wholeness

Creation reflects the integrity, grace and beneficence of its Creator (Psalm 19:1). At first the Earth is formless and empty. But the Spirit of God hovers over the waters, light is created, and all things are brought into being. They are created with order and integrity, and they are declared by the Creator to be "good" — "very good." Creation's voice leaves all people without excuse but to know God's divinity and eternal power.

Board of Directors

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Creation's Impoverishment

Human beings have been charged with the responsibility to honor and nurture creation. Yet we humans have dishonored it, degraded it and disfigured it. Air, water, soil, other species, the wild beauty of wilderness have all been severely damaged. Having been told to "choose life," frequently we have instead chosen death. Not only is creation's fruit taken, but creation's very fruitfulness is destroyed. The integrity of creation is violated through urbanization, erosion and desertification; deforestation, species extinctions, and degradation of indigenous cultures.

The NACCE Response

We dare to strive for a change in the way Christians perceive their role in

Creation. We urge Christians to awaken to the obligation in their own traditions to assume responsibility for the well-being of the natural world in the place where they live, worship and work.

We encourage a just and sustainable human community in the context of a respected, protected and restored creation. Our mission is to bring people and society to develop and promote a loving, compassionate and meek relationship with all creation.

We seek to catalyze Christians into Creation awareness, ecological knowledge and appropriate activity. Our role is to assist and serve the churches. We recognize that repentance brings us to this stage but our work is done in joyful praise, service, thanksgiving and celebration.

Actions

To implement the NACCE vision, a number of programs have been established to support conference goals:

Resource Center: The headquarters offices provide a variety of programs and membership support services. A Catholic resource packet is available.

Conferences: A primary activity of the NACCE has been conferences which identify the parameters of Christian ecology and the application of its earth-stewarding principles to home and family, church and community.

Publications: *Firmament* magazine, the NACCE Journal, provides articles on the broad range of Christian ecological activity. *Earthkeeping News* is a

bi-monthly compendium of practical information.

Board of Advisors

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Helen Vukasin, New Paltz, New York

Membership: Here is a means for you to enter into an earth-healing ministry. Join us! Benefits include a one year subscription to *Firmament* magazine, *Earthkeeping News*, association with like-striving Christians, and support of a growing national movement.

Future Activities: Anticipated activities include chapter formation, establishing the Green Cross as an earth restoration organization, a speakers' bureau, youth programs, an exchange with Russian church ecologists, liturgical and educational resources for pastors, denominational ecology packets, and practices that advance the ability of members to implement Christian ecological concern. †

Membership Application Form

☐ YES! I want to join in promoting Christian concern for the earth. Please enter a membership for me in the category checked below:

Enclosed is my membership check for:

☐ \$25. Individual membership

☐ \$100. Contributing member

☐ \$50. Sustaining member

☐ \$750. Life member

Name _____

Address _____

City, State _____ Zip _____

All members receive a membership card, organizational information, subscriptions to both *Firmament* magazine and the bi-monthly *Earthkeeping News*, plus occasional information mailings from the NACCE headquarters.

Please make checks payable to the NACCE.

To enroll, please cut out and mail a completed application and check to:
NACCE, Membership, PO Box 14305, San Francisco, CA 94114

Society of American Foresters Community Service Project

The Society of American Foresters is a scientific and educational organization of forestry professionals around the country. Its 18,000 members work in federal, state and local agencies; private industry; and universities. Many others are students or retired professionals.

The objective of the Society of American Foresters is to advance the science, technology, practice, and education of the professional forestry, and to use the skills of the profession to benefit society.

To help do this, SAF chapters around the country have participated in an active community involvement program for the past four years. These chapters help in planting projects, youth education programs and camps, nature trail construction and maintenance, and other projects.

In 1992, SAF set as a nationwide goal the accomplishment of 100,000 hours of community service by its 18,000 members. They are undertaking this challenge as SAF units, as individuals, and in their conservation work with other organizations.

If you have a forestry-related project in mind and would like the name of a local SAF contact to assist with your planning or to provide technical expertise, contact Sarah Zollman at the SAF national office, 5400 Grosvenor Lane, Bethesda, Maryland, 20814, or telephone 301/897-8720.

CONGRESSIONAL HEARING
BACKGROUND AND QUESTIONS FOR FINAL PANEL

Both religion and science offer fundamental perspectives on the role of humankind in the planet's environment. To complement these perspectives, a final panel will offer the perspectives of economics, commerce, and philosophy. Unlike science and religion, the disciplines of economics and philosophy are rooted exclusively in human conditions, actions, and consequences. While scientists and religious leaders can offer the vision of stewardship, economics and philosophy will provide insight on how to affect the necessary changes in social institutions. The practical application of economics and philosophy -- commerce and political discourse -- will provide the primary agents of change.

The final panel represents a broad range of perspectives. Herman Daly has pushed the boundaries of economics into the realms of both science and religion. Mark Sagoff is a political philosopher who has studied the institutions and processes of modern American environmental law and economics. Art Fitzgerald is a businessman who, when faced with an environmental challenge, responded like an entrepreneur attempting to create value from opportunity.

SUGGESTED QUESTIONS

[Note: These questions were developed prior to receiving testimony from the panelists, and are based on previous statements and writings. The questions may have limited relevance to the delivered remarks.]

QUESTIONS FOR HERMAN DALY:

By recognizing the physical nature of economic activity, how does ecological economics alter the vision of economic progress?

What are the moral dimensions of ecological economics?

How can we adapt our economic and political institutions to conform to the precepts of ecology?

What is the future of ecological thinking in economics?

How can ecological constraints be integrated into economic activity?

QUESTIONS FOR MARK SAGOFF

What were the defining events in the evolution of American environmental philosophy?

How does the ethic of environmental protection differ between local concerns and global problems?

Are political institutions adaptable to evolving environmental ethics?

Do political institutions anticipate and foster environmental ethics, or do they tend to resist?

Has there been an erosion or expansion of environmental ethics during the 1980s?

Does science or religion shape the environmental ethics of citizens?

How can scientists and religious leaders contribute to the evolution of environmental ethics and the vision of stewardship?

QUESTIONS FOR ART FITZGERALD

How can the spirit of competition work for environmental protection?

Why do some corporations resist environmental progress while others embrace it?

What are the advantages of goals compared to rules in achieving environmental progress?

How can corporations foster an environmental ethic? Does it come from the top or the bottom?

Are shareholders becoming more interested and active in the environmental performance of firms?

Herman Daly is a Senior Economist with the World Bank. He has written extensively on environment and development. He has:

- critiqued conventional economics for ignoring physical reality of production and consumption;
- extended economic analysis to incorporate physical and ecological aspects; and
- examined moral and spiritual dimensions of economic activity and policy.

Modern economic theory has become successively more abstract, and one of the realities that theory has discarded is the physical basis for production of goods and the generation of waste. Thus, "land" as a productive input has become "rent," labor has become "wage" and by-products are ignored or labeled "externalities." Some economic theory actually violates the first law of thermodynamics (conservation of mass and energy) and most theory violates the second law (increase in entropy as a result of work). The implications of ignoring these realities for large economic systems is to discount the fact that economic activity occurs within the biophysical world -- economy is a subset of ecology.

While Daly does not embrace purely physical economic modeling (e.g. an energy theory of value) he does insist that fundamental physical laws be observed in order for realistic long-run economic outcome to be properly evaluated. Thus, while market economies naturally substitute capital, labor and knowledge for materials, and technology trends can help alleviate scarcity over long periods of time, the basic Malthusian dilemma of increasing material scarcity will eventually reduce economic well-being if economic growth exceeds physical and natural capacities. In addition to input scarcity, the fact that economic production occurs within a finite ecosystem implies that the waste absorption capacity of the ecosystem will become progressively more stressed as more by-products are delivered into the environment.

Daly has pioneered the development of "ecological economics" of which environmental macroeconomics is important. Here, the notion of the scale of the economy relative to the finite ecosystem become central. This leads to the proposition that infinite "growth" in economic activity is impossible (unsustainable), while economic "development" can improve well-being. Development in this context is concerned with improving the quality of life without exceeding the limits of natural resource exploitation and waste absorption -- the "scale of the physical economy" as measured by material throughput must remain constant.

Along with theologian John Cobb, Daly has also explored the moral and spiritual dimension of economics. Their book *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future* expands economic analysis to include "community with other people, other species, and other generations."

Mark Sagoff is a professor at the Center for Philosophy and Public Policy at the University of Maryland. He has written extensively on the guiding philosophy of environmental economics and policy.

His collection of essays *The Economy of the Earth: Philosophy, Law, and the Environment* explores social policy in the areas of environment, pollution, the workplace, safety, and health. The questions he poses include:

- To what extent is government justified in interfering with the wishes of individuals?
- What are the goals of social legislation?
- How can they best be achieved, and are they worth the costs?

Professor Sagoff debunks an influential approach to environmental policy that reduces social values to benefits and costs incurred by individuals. He presents an analysis based on ethical, cultural, and political concerns that reveals how environmental legislation can be sensitive to political reality and economic costs. Sagoff has explored the relationship to classic liberalism and environmentalism, the place of values in environmental science, the importance of a "land ethic," the role of public interest groups, and efforts to reform environmental law.

Sagoff examines how many environmental economists, and policymakers who would listen to them, make a "category mistake" by trying to value environmental quality in terms of consumer satisfaction as revealed in the marketplace. By distinguishing the role of a person as a consumer and as a citizen, he points out that many important public values are created independently of private economic calculation. This means that efforts to place market values on environmental quality will collide with the cherished view that the environment has moral, ethical, and aesthetic qualities that cannot, and should not, be reduced to ordinary market prices.

Sagoff traces the view of the relationship of humankind to natural environment through American history and literature. The evolution of environmental values, and public policies that embody these values, has often been at odds with other visions of "progress." Nevertheless, environmental ethics remain the appropriate underpinning of environmental policy, and efforts to set environmental goals based on strict economic calculus are destined to fail because they ignore the fact citizens prefer to debate environmental values as political issues, not consumer choices.

STEADY-STATE ECONOMICS

Second Edition with New Essays

HERMAN E. DALY

ISLAND PRESS

Washington, D.C. □ Covelo, California

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THE STEADY-STATE ECONOMY: ALTERNATIVE TO GROWTHMANIA

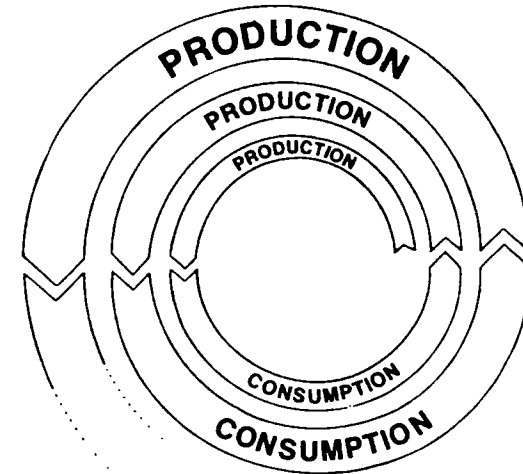
Introduction

The economy grows in physical scale, but the ecosystem does not. Therefore, as the economy grows it becomes larger in relation to the ecosystem. Standard economics does not ask how large the economy should be relative to the ecosystem. But that is the main question posed by steady-state economics. Standard economics seeks the optimal allocation of resources among alternative uses and is, at best, indifferent to the scale of aggregate resource use. In fact it promotes an ever-expanding scale of resource use by appealing to growth as the cure for all economic and social ills. While not denying the importance of optimal allocation, steady-state economics stresses the importance of another optimum—the optimum scale of total resource use relative to the ecosystem. These contrasting visions are represented in figure 7.

What Is a Steady-State Economy?

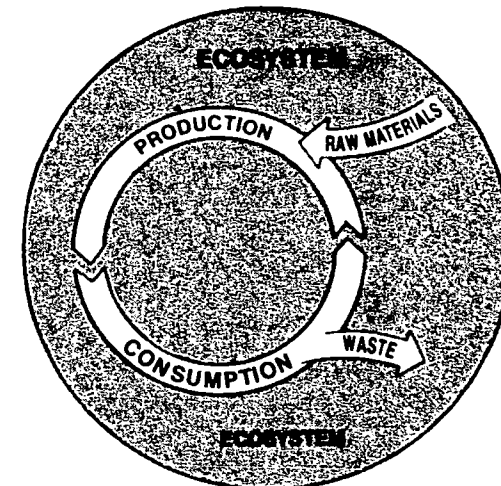
A steady-state economy (SSE) is an economy with constant stocks of artifacts and people. These two populations (artifacts and people) are constant, but not static. People die, and artifacts depreciate. Births must replace deaths, and production must replace depreciation. These “input” and “output” rates are to be equal at low levels so that life expectancy of people and durability of artifacts will be high. Since the input flow of matter-energy equals the output flow when both populations are constant, the two flows may be merged into the concept of

STANDARD ECONOMICS



Standard economics considers ever-growing cycles of production and consumption but does not consider the role of the supporting ecosystem. Such a view can encourage an economy that can ultimately strain the surrounding environment.

STEADY-STATE ECONOMICS



Steady-state economics considers cycles of production and consumption that take the surrounding ecosystem into account and try to achieve a state of equilibrium with it.

Figure 7

Source: "Towards a New Economic Model," *Bulletin of the Atomic Scientists*, April 1986.

"throughput." The throughput flow begins with depletion, followed by production, depreciation, and finally pollution as the wastes are returned to the environment. The economy maintains itself by this throughput in the same way that an organism maintains itself by its metabolic flow. Both economies and organisms must live by sucking low-entropy matter-energy (raw materials) from the environment and expelling high-entropy matter-energy (waste) back to the environment.¹ In the SSE this throughput must be limited in scale so as to be within the regenerative and assimilative capacities of the ecosystem, insofar as possible.

It is important to be clear about what is *not* constant in the SSE. Knowledge and technology are not held constant. Neither is the distribution of income nor the allocation of resources. The SSE can develop qualitatively but does not grow in quantitative scale, just as planet earth, of which the economy is a subsystem, develops without growing. Neoclassical growth models notwithstanding, the surface of the earth does not grow at a rate equal to the rate of interest! Neither can the physical stocks and flows that make up the economy continue for long to grow at compound interest. As Nobel laureate chemist and underground economist Frederick Soddy noted long ago:²

You cannot permanently pit an absurd human convention, such as the spontaneous increment of debt [compound interest], against the natural law of the spontaneous decrement of wealth [entropy].

The concept of the SSE can be clarified by analogy to a steady-state library, an idea that has attracted the attention of some librarians who realize that their stock of books cannot continue to grow exponentially. A steady-state library would have a constant stock of books. Whenever a new book is added, an old one must be gotten rid of. The rule would be to add a book only if it were qualitatively better than some other book whose place it would take. The steady-state library would continue to improve qualitatively, but its quantitative physical scale would remain constant. Likewise for a steady-state economy. The end of physical accretion is not the end of progress. It is more a precondition for future progress, in the sense of qualitative improvement.

One might object to this argument on the grounds that conventional economic growth is not defined in physical units but in terms of GNP, which is in units of value, not tons of steel or barrels of oil. It is quite true that GNP is in value units, because this is necessary to aggregate diverse physical units by means of a common denominator that bears some relation to the degree to which diverse things are wanted. Nevertheless, a dollar's worth of GNP, just like a dollar's worth of gasoline or wheat, is an index of physical quantities. In calculating growth in real GNP, economists correct for price changes in order to capture only changes in quantity. It is also true that GNP includes services, which are not physical things. But a service is always rendered by something physical, either a skilled person or a capital good, over some time period.

Growth in the service sector does not at all escape physical constraints. In any case the SSE is defined in physical terms, *not* as zero growth in GNP.

What Is Growthmania?

The above definition of a steady-state economy stands in great contrast to the regime of economic growthmania characteristic of the modern world. Economic growth is currently the major goal of both capitalist and socialist countries and, of course, of Third World countries. Population growth is no longer a major goal for most countries, and in fact a slowing of demographic growth is frequently urged in spite of considerable retrogression on this issue by the Reagan administration. But the usual reason for urging slower demographic growth is to make room for faster economic growth. Economic growth is held to be the cure for poverty, unemployment, debt repayment, inflation, balance of payment deficits, pollution, depletion, the population explosion, crime, divorce, and drug addiction. In short, economic growth is both the panacea and the *summum bonum*. This is growthmania. When we add to GNP the costs of defending ourselves against the unwanted consequences of growth and happily count that as further growth, we then have hyper-growthmania. When we deplete geological capital and ecological life-support systems and count that depletion as net current income, then we arrive at our present state of terminal hyper-growthmania.

World leaders seek growth above all else. Therefore to oppose growth, to advocate a SSE, is not something to be done carelessly. One must present good reasons for believing that the growth economy will fail and also offer good reasons for believing that a SSE will work. That is the aim of the remainder of this article.

Origins of the Growth Dogma

How did we come to believe so strongly in the dogma of economic growth? What vision of the world underlies this commitment to continuous expansion, and where does it go wrong?

Open any standard introductory text in economics, and in the first chapter you will find a circular flow diagram. In this diagram, exchange value embodied in goods and services flows from firms to households and is called national product, while an equal flow of exchange value embodied in factors of production returns from households to firms and is called national income. The picture is that of an isolated system. There are no inflows or outflows connecting the circular flow to its "other," the environment.

If we think only in terms of abstract exchange value, the picture is reasonable. If we think in terms of money, the physical token of exchange value, the

picture is not unreasonable, but is no longer strictly correct because, although money flows in a circle, on each circuit it wears out a bit. New money must be minted or printed to make up for worn-out money. Thus there is a physical throughput associated with this circulation of currency. Yet we may argue that with money the circular flow is dominant and the throughput is incidental. But when we shift to real goods and services making up national income, the real physical processes of production and consumption, then the throughput is dominant and the circular flow is incidental. Yet we find leading textbooks proclaiming that "The flow of output is circular, self-renewing, and self-feeding" and that "the outputs of the system are returned as fresh inputs."³ One wonders what "fresh" could possibly mean in this context of an isolated circular flow? The authors were trying to explain how the circular flow is replenished so it can go on for another round. But in an isolated system, replenishment must be internal. A self-replenishing isolated system is a perpetual motion machine! **Replenishment requires a throughput.** Abstract exchange value may circulate in an isolated system because it has no physical dimension. Money may be thought of as flowing in a circle even though some throughput is required. But real production and consumption are in no way circular. They are based on a linear throughput beginning with depletion and ending with pollution. An economy is an open system, not an isolated system. Connections to the larger environment cannot be abstracted from without losing the most essential fact.

In the circular flow vision, matter is arranged in production, disarranged in consumption, rearranged again in production, etc. Nothing gets used up. The first law of thermodynamics can be appealed to in support of this vision: matter can be neither created nor destroyed, only rearranged. Economic growth is just a question of speeding up the circular flow; and if nothing is used up there are no limits to growth, there is no problem of replenishment from the outside.

Of course this picture flatly contradicts the second law of thermodynamics, which says, in effect, that the capacity to rearrange indestructible building blocks is not itself indestructible. It gets used up irrevocably. As we have seen, the standard vision sees the economy as a perpetual motion machine.

The gravity of such a contradiction for any theory is indicated by Sir Arthur Eddington:⁴

The law that entropy increases—the Second Law of Thermodynamics—holds, I think, the supreme position among the laws of nature. If someone points out to you that your pet theory of the universe is in disagreement with Maxwell's equations—then so much the worse for Maxwell's equations. If it is found to be contradicted by observation—well, these experimentalists do bungle things sometimes. But if your theory is found to be against the Second Law of Thermodynamics, I can give you no hope; there is nothing for it but to collapse in deepest humiliation.

Economists, however, are not without some excuses for their predicament. They do not really deny that raw materials come from the environment, or that waste returns to the environment. But economic theory developed at a time

when the environment was considered an infinite source and sink because it was so large relative to the economy. Since the throughput flow went from an infinite source to an infinite sink it involved no scarcity and could, presumably, be abstracted from for purposes of economic theory. But economic growth means that the scale of the economy gets bigger, and it is now no longer reasonable to treat it as infinitesimal relative to the ecosystem. It is time for the concept of throughput to displace the circular flow from the center stage of economic theory.⁵

If such a restructuring of economic theory is to be avoided, then the assumption of infinite sources and sinks must be in some way maintained, or else a substitute premise that has similar logical consequences must be found. The latter strategy has been more common and consists in discovery of an "ultimate resource," which is both infinite in amount and infinitely substitutable for other resources, and therefore has the same limits-abolishing effect as the original premise of infinite sources and sinks for physical resources. This "unlimited resource" is variously referred to as technology, information, knowledge, or the human mind. Anyone who asserts the existence of limits is soon presented with a whole litany of things that someone once said could never be done but subsequently were done. Certainly it is dangerous business to specify limits to knowledge. But it is equally dangerous to presuppose that the content of new knowledge will abolish old limits faster than it discovers new ones. The discovery of uranium was new knowledge that increased our resource base. The subsequent discovery of the dangers of radioactivity did not further expand the resource base, but contracted it. Before getting carried away with the idea that the human mind is an "ultimate resource" that can generate endless growth, let us remember that, while certainly not reducible to physical or mechanical terms, the mind is not independent of the physical body. "No phosphorous, no thought," as Frederick Soddy put it. Or as Loren Eiseley reminds us, "The human mind, so frail, so perishable, so full of **inexhaustible dreams and hungers, burns by the power of a leaf.**" Minds capable of such insight ought to be capable of showing more restraint toward leaves and phosphorous than is usually exhibited by our growth-bound economy. Mere knowledge means little to the economic system unless it is embodied in physical structures. As Boulding reminds us, capital is knowledge imprinted on the physical world in the form of improbable arrangements. But knowledge cannot be imprinted on any kind of matter by any kind of energy. The constricted entry point of knowledge into the physical economy is through the availability of low-entropy resources. No low-entropy resources, no capital—regardless of knowledge, unless the second law of thermodynamics is abolished.

It has been said that the best measure of a scientist's influence is how long he can hold up progress in his own discipline. By this measure, the editors of the major economics journals are probably the most influential scientists of all time! Continuing to study economies only in terms of the circular flow model is like studying organisms only in terms of the circulatory system, without ever

mentioning the digestive tract. Yet that is what the mainline professional journals, in their dogmatic commitment to growth, insist on.

Money Fetishism

Money fetishism is a particular case of what Alfred North Whitehead called the "fallacy of misplaced concreteness," which consists in reasoning at one level of abstraction, but applying the conclusions of that reasoning to a different level of abstraction. It is to argue that since abstract exchange value flows in a circle, so does real GNP. Or since money can grow forever at compound interest, so can real wealth. What is true for the abstract symbol or token of wealth is held to be true for concrete wealth itself. This is money fetishism.

Marx, and Aristotle before him, pointed out that the danger of money fetishism arises when society shifts its focus from use value to exchange value. Simple commodity production, the sequence of C-M-C' (commodity-money-other commodity) begins and ends with a concrete use value embodied in a commodity. Money is merely an intermediary facilitating exchange, the object of which is to acquire an increased use value. C' is a greater use value than C, but both are limited by their specific purposes. One has, say, greater need for a hammer than a knife, but has no need for two hammers, much less of fifty. As simple commodity production gave way to capitalist circulation the sequence shifted to M-C-M' (money-commodity-more money). The sequence begins and ends with money capital, and the commodity or use value is an intermediary step in bringing about the expansion of exchange value. M' is greater than M, representing growth in abstract exchange value, which does not impose its own concrete limits. One dollar of exchange value is not as good as two, and fifty dollars is better still, and a million is much better, etc. Unlike concrete use values, which spoil or deteriorate when hoarded (due to entropy), abstract exchange value can accumulate indefinitely without spoilage or storage cost. In fact exchange value grows by itself, it earns interest. But as Soddy told us, we cannot permanently pit an absurd human convention against a law of nature. The physical limit to growth at the micro level imposed by the absurdity of accumulating use values has been bypassed by accumulating exchange value (money and interest-bearing debt). But unless the aggregate of real concrete wealth can grow as fast as the accumulations of abstract exchange value, there will be a devaluation of exchange value (inflation) or some other form of debt repudiation or confiscation in order to bring accumulations of exchange value back into equality with accumulations of real wealth.

Money fetishism and growthmania are alive and well in a world in which banks in wealthy countries make loans to poorer countries, and when the debtor countries cannot make the repayment the banks simply make new loans to enable the repayment of interest on old loans, and thereby avoid taking a loss on a bad debt. The exponential snowballing of the debt that results when new loans

are needed to pay interest on old loans cannot continue. The faith is that somehow real growth in the debtor countries will also snowball. The international debt crisis is a clear symptom of the basic disease of growthmania. Too many accumulations of money are seeking ways to grow exponentially in a world in which the physical scale of the economy is already so large relative to the ecosystem that there is not much room left for exponential growth of anything having a physical dimension.

The paper economy offers more scope for "growth" than the real economy. Mergers, takeovers, "greenmail," tax-avoidance schemes, and other forms of rent seeking seem more profitable than production of commodities. Accountants, investment bankers, and tax lawyers make more money than engineers because manipulating abstract symbols is easier than rearranging concrete materials into more useful structures. M-M' replaces M-C-M'. Commodity use values disappear altogether and with them all natural limits to the expansion of exchange value. The "paper economy" is the result.

Limits to Growth: Biophysical and Ethicosocial

Biophysical conditions limit the possibility of economic growth even in cases where growth may still be desirable. Ethicosocial conditions limit the desirability of growth even in cases where growth is still possible.

Three interrelated conditions—finitude, entropy, and complex ecological interdependence—combine to provide the biophysical limits to growth. The growth of the economic subsystem is limited by the finite size of the total ecosystem, by its dependence on the total system as a source for low-entropy inputs and a sink for high-entropy waste outputs, and by the intricate ecological connections that are more pervasively disrupted as the physical scale of the economic subsystem grows relative to the enveloping ecosystem. Moreover, these three limits interact. Finitude would not be so limiting if everything could be recycled, but entropy prevents complete recycling of matter and forbids any recycling of energy. The entropy law would not be so limiting if environmental sources of low entropy and sinks for high entropy were infinite, but both are finite. The fact that both sources and sinks are finite, plus the entropy law, means that the ordered structures of the economic subsystem are maintained at the expense of creating a more than offsetting amount of disorder in the rest of the system. If the part of the system that pays the entropy bill is the sun (as in traditional peasant economies), then we need not worry. But if the disorder is imposed mainly on parts of the terrestrial ecosystem (as in modern industrial economies), then we need to count the cost of that disorder.

This disordering of the ecosystem (depletion and pollution) interferes with the life-support services rendered to the economy by other species and by natural biogeochemical cycles. The loss of these services should surely be counted as a cost of growth, to be weighed against benefits at the margin. But, as

we have already seen, our national accounts do not do this. Indeed we now count the extra economic activity made necessary by the loss of free natural services as further growth. If the source of our drinking water becomes polluted, then we need more purification plants, and up goes GNP.

Even when growth is still biophysically possible, other factors may limit its desirability. Four ethicosocial propositions limiting the desirability of growth are considered below.

(1) The desirability of growth financed by drawdown of geological and ecological capital is limited by the opportunity cost imposed on future generations. Since future people cannot bid in present markets, we cannot reasonably expect current resource prices to reflect opportunity costs beyond ten or fifteen years in the future.

(2) The desirability of growth financed by takeover of the habitats of other species is limited by the extinction or reduction in number of sentient subhuman species whose habitat disappears. The loss of natural services rendered by these species (their instrumental value to us) was considered under the heading of biophysical limits. The issue here is the intrinsic value of these species as centers of sentience and creatures of God. It is not suggested that subhuman species' "utility" should count equally with that of humans, even if it were possible for these creatures to bid in the marketplace. But surely their feelings of pleasure and pain deserve a weight greater than zero in our cost-benefit analyses. Even Jeremy Bentham, from whom economists took their utilitarian philosophy, was of this opinion.

(3) The desirability of aggregate growth is limited by its self-cancelling effects on individual welfare. Growth in rich countries is, at the current margin, dedicated to the satisfaction of relative rather than absolute wants. Welfare increments are more a function of changes in relative position than of absolute level of consumption. After some level of absolute income is reached, we must agree with J. S. Mill that, "Men do not desire to be rich, but to be richer than other men." Aggregate growth cannot possibly make all people richer than other people! Relative improvement is a zero sum game in the aggregate.

(4) The desirability of growth is limited by the corrosive effects on moral capital of the very attitudes that foster growth, such as glorification of both self-interest and the technocratic-reductionistic world view. On the demand side of the market, growth is stimulated by greed and acquisitiveness. On the supply side, technocratic scientism proclaims limitless expansion and preaches a reductionistic, mechanistic philosophy that, in spite of its success as a research program, has serious shortcomings as a world view. As a research program, it furthers power and control, but as a world view it leaves no room for purpose, much less for any distinction between good and bad purposes. "Anything goes" is a convenient moral stance for a growth economy because it implies that anything also sells. Expanding power and shrinking purpose lead to uncontrolled growth for its own sake. To the extent that growth has a well-defined purpose, it is limited by the satisfaction of that purpose. For example, if growth

were really for the sake of the poor, we would limit it to producing things needed by the poor, and would stop when the poor were no longer poor. But if growth must never stop, then we must never define our purposes too clearly, lest they should be attained and we lose our reason to grow!

The Issue of Optimal Scale

If growth must never stop, then neither should we measure the costs of growth in our national accounts, lest we discover that they become equal to the benefits at the margin and thus define an optimal scale beyond which it would be antieconomic to grow! By discovering the existence of such an optimal scale, we would threaten ourselves with a question to which we do not know the answer: namely, how can we shift from a growth economy to a steady-state economy without risking economic collapse? It is nonsensical to advocate growing beyond the optimum, but politically risky to advocate nongrowth. What to do?

The answer given by some neoclassical economists is, "don't worry, the market will automatically keep us from growing beyond any optimal scale even if such were likely, which it is not because technical progress pushes aside all apparent limits to growth."

For all its virtues, technological advance cannot escape the entropy law, nor can the market register the cost of increasing its own scale relative to the ecosystem. The market measures the relative scarcity of individual resources; it cannot measure the absolute scarcity of resources in general, of environmental low entropy. The best we can hope for from a perfect market is a Pareto optimal allocation of resources (i.e., a situation in which no one can be made better off without making someone else worse off). Such an allocation theoretically could be attained at any scale, just as it is theoretically attainable for any distribution of income.

Most of the consequences of increasing scale are experienced as pervasive external costs. Services and amenities that were free at a smaller scale become scarce at the larger scale. Once the growing scale has turned formerly free goods into scarce goods, then it is certainly better to give them positive prices than to continue to behave as if their price were zero. But there remains a prior question. How do we know that we were not still better off at the smaller scale, before the free good became an economic good? Perhaps we are just always making the best of an increasingly bad situation. The optimal allocation of resources (Pareto optimum) is one thing. The optimal scale of the economy relative to the ecosystem is something else entirely. As growth in scale forces us to turn previously free goods into economic goods, it swells GNP but may reduce welfare, even if the newly scarce goods are optimally priced.

There is an instructive parallel between the relation of scale to the price system and the more familiar relation of distribution to the price system. It is

well known in economic theory that the price system in pure competition would attain an efficient allocation of resources in the sense of a Pareto optimum. It is further known that Pareto optimality is independent of the distribution of ownership of physical resources—i.e., there is a Pareto-efficient allocation for any distribution, including unjust distributions. Therefore the social goal of distributive justice must be pursued independently of (but not necessarily in conflict with) the price mechanism. Likewise, I suggest, for the question of scale of throughput. At any stage of growth, at any scale of throughput, the price system can optimally allocate the given volume of throughput among alternative uses. But just as there is nothing in the price system that can identify the best distribution of ownership according to criteria of justice, neither is there anything that allows the price system to determine the best scale of throughput according to ecological criteria of sustainability. Just as a Pareto optimal allocation may coexist with a socially unjust distribution, so may it coexist with an ecologically unsustainable scale. Indeed, there is a sense in which the unsustainable scale is simply an unjust distribution with respect to future generations.

Perhaps an analogy will clarify this important point. Consider a boat. Suppose we want to maximize the load that the boat carries. If we place all the weight in one corner of the boat it will quickly sink or capsize. Therefore we spread the weight out evenly. To do this we may invent a pricing system. The heavier the load in one part of the boat the higher the price of adding another pound in that place. We allocate the weight so as to equalize the cost per additional capacity used in all parts of the boat. This is the internal equimarginal rule for allocating space (resources) among heavy objects (alternative uses) so as to maximize the load carried. This pricing rule is an allocative mechanism only, a useful but dumb computer algorithm that sees no reason not to keep on adding weight and allocating it optimally until the optimally loaded boat sinks, optimally of course, to the bottom of the sea. What is lacking is an absolute limit on scale, a recognition that the boat can displace only so much water, a rule that says, "stop when total weight is one ton, or when the waterline reaches the Plimsoll mark." Price is only a tool for finding the optimal allocation. The optimal scale is something else. The market by itself has no criterion by which to limit its scale relative to its environment. Its basic thrust of exchange value accumulation at the micro level, amplified by Keynesian policies at the macro level, is toward continuous growth in GNP, which under present conventions of national accounting, implies a growing scale of throughput.

Transition from Growth to the Steady State

A realistic discussion of a transition cannot assume a blank slate, but must start with the historically given initial conditions currently prevailing. These given initial conditions I take to be the institutions of private property and the price

system. These basic institutions must be bent and stretched, but not abolished, because we lack the wisdom, the leadership, and the time to replace them with something novel. This consideration lends a fundamental conservatism to a line of thought that will nevertheless appear quite radical to many.

A complementary design principle for guiding our speculations on the transition is to seek to combine micro freedom and variability with macro stability and control. This means, in practice, relying on market allocation of an aggregate resource throughput whose total is not set by the market, but rather fixed collectively on the basis of ecological criteria of sustainability and ethical criteria of stewardship. This approach aims to avoid both the Scylla of centralized planning and the Charybdis of the tragedy of the commons.

From the definition of a steady-state economy in the Introduction to this chapter, it is clear that it requires two kinds of limits: limits on the population of human bodies; and limits on the population of artifacts. A third, limit, not derivable from the definition, but important in the interest of justice, is to impose limits on the degree of inequality in the distribution of artifacts among people—i.e., limited inequality in the distribution of income. How could these three limits be institutionalized so as to achieve necessary macro level control with the minimum sacrifice of freedom at the micro level?

The population of artifacts could be limited by controlling its "food supply," the throughput. By limiting the aggregate throughput at the point of origin (depletion) we indirectly limit the scale of physical stocks, and indirectly limit pollution outflow as well, at least in a gross quantitative sense. There remains the important problem of controlling the qualitative nature of wastes (degrees of toxicity and biodegradability) that would have to be dealt with separately by pollution taxes or standards. Several institutions could be used to limit depletion. Elsewhere I have suggested a depletion quota auction, and Talbot Page has suggested a national ad valorem severance tax.⁶

In the depletion quota auction, the resource market would become two-tiered. In the first tier the total amount to be extracted of each resource category would be set by a government agency and auctioned off in divisible units as rights to purchase or extract the resource up to the specified amount. Purchase of the depletion quota allows entry into the second tier of the market, which would be a private competitive market. In addition to paying the market price to the extracting company, the purchaser must present the previously purchased depletion quota rights that the firm will present to auditors at tax time. The scheme sets total quantity centrally, but leaves the decentralized price system to determine allocation of the fixed total among alternative uses.

The severance tax alternative is similar. By taxing depletion, we lower the throughput to some socially determined level judged to be within ecosystem tolerance limits. Once again aggregate throughput is controlled, yet the allocation at the micro level is left to the market. The advantage of the severance tax is that it is administratively simpler. Indeed, Page argues that it amounts to nothing more than reversing the algebraic sign of the existing depletion

allowances. Instead of subsidizing depletion we would tax it. The disadvantage of the tax is that the aggregate throughput is controlled only indirectly and less tightly than with a depletion quota. Quantity as well as price is free to vary, whereas in the quota system all adjustment is in terms of price. The ecosystem is sensitive to quantities, not prices, so the quota system is safer ecologically. Yet the severance tax is surely simpler administratively and more likely to gain support as a first step.

Either of these institutions will have the following effects: (1) reduce the levels of depletion and pollution, and limit the scale of the aggregate stock of artifacts; (2) raise relative prices of resources, which will force greater efficiency in resource use; (3) result in a large revenue or rent to the government in the form either of tax or auction receipts. This third consequence ties in with limits on inequality.

Higher resource prices would by themselves likely have a regressive effect on income distribution, much like a sales tax. However this effect can be more than offset by distributing the receipts progressively. Inequality might be limited simply by setting minimum and maximum income limits. The minimum might work along the lines of a negative income tax and be financed by the resource rents collected by the government. In this way we would serve the goal of ecological sustainability by limiting throughput scale, would serve the goal of efficiency by high resource prices, and serve the goal of equity by redistributing the resource rents resulting from the higher prices that in turn result from limits on the scale of throughput.

The minimum income and negative income tax ideas have some political support, but the maximum income does not. Many fear that a maximum would dull incentives and reduce growth. But if growth is no longer the *summum bonum*, then incentives at the top become less important. A range of inequality would continue to exist to reward real differences in effort, risk, and conditions of work. Incentive differentials are important, and fairness in a larger sense is certainly not served by trying to equalize all incomes. But probably a factor of ten difference would be a sufficient range of functional inequality. The incentives argument for unlimited inequality is much exaggerated, especially in the United States. Japanese auto executives reportedly make six to eight times what assembly-line workers earn. American auto executives make about fifteen times the wage of the unionized assembly line worker. Furthermore U.S. workers are laid off when sales drop, while managers keep their jobs, usually with no cut in salary, whereas in Japan everyone shares the burden of bad times. It is very clear that this larger inequality has not resulted in the U.S. auto industry being more efficient than the Japanese! In fact it may be that the richer the managers become the less incentive they have to work hard, and the greater the resentment and uncooperativeness of workers who know that they will be laid off at the first sign of recession.

The proper range of inequality is a subject for further research, reflection, and debate, once the principle of a limited range of inequality is accepted.

Regarding limits to population, there are many possibilities, ranging from the coercive Chinese system to complete *laissez faire*. My own favorite institution is that first suggested by Kenneth Boulding: exchangeable birth quotas issued in an aggregate amount corresponding to replacement fertility, distributed equally among individuals, but reallocated voluntarily by sale or gift. This plan combines macro control with micro freedom to a very high degree. However the idea of reproduction rights being exchanged on a market is for many people unacceptable, and some cannot even distinguish between selling a legal right to reproduce and selling a baby. How some people can get so upset with this proposal while accepting the current "rent-a-womb" practices and the Nobel Laureate sperm bank for single mothers is beyond me. In any case debate on this controversial issue detracts attention from the other institutions that do not depend on it. Therefore, for present purposes I will invite the reader to substitute his or her own population policy.⁷ I mention this one for logical completeness only.

These proposed institutions have the advantage of being capable of gradual application during a transition period. Initially the depletion quotas could be set high, near current levels (or severance taxes low), and applied first only to energy, the most general of resources. The distributive limits could be initially set far apart. Birth quotas could be issued in amounts not much different from actual fertility. Once the institutions were in place the limits could be tightened, like the jaws of a vice, as gradually as desired. Of course in a democratic society they could also be loosened to the point of being totally ineffective, if the political will be lacking.

There may, of course, be better ways of stretching and bending the institutions of private property and the market system than the ones I have suggested. But I think one is obliged to suggest something specific in the same way that an auctioneer is obliged to call out an initial price to start the bidding. He does not believe that his price will actually be the sale price, but without a specific starting point the trial and error feedback of bidding will never get started. Nor will the feedback process of critical discussion begin as long as economists think that the concept of the SSE is not worth "bidding on"—as long as they remain committed to the illusion of growthmania.

There are many further problems and issues in the transition to a SSE, such as international trade adjustments between growing and steady-state economies, and legitimate Third World needs for further growth up to a sufficient level. These are important issues that merit discussion. But in a sense it is premature to discuss further these problems of transition as long as we have not yet firmly established the case that: (1) the growth economy is unworkable; and (2) the SSE is, in broad outline, a feasible and desirable alternative.

The first order of business is to make that case as clearly and cogently as possible. However, that is not likely to be sufficient. The Keynesian revolution did not occur because Keynes' arguments were so compellingly lucid and unanswerable. It was the Great Depression that convinced people that some-

thing was wrong with an economic theory that denied the very possibility of involuntary unemployment. Likewise it will probably take a Great Ecological Spasm to convince people that something is wrong with an economic theory that denies the very possibility of an economy exceeding its optimal scale. But even in that unhappy event, it is still necessary to have an alternative vision ready to present when crisis conditions provide a receptive public.

NOTE: This chapter appeared originally as *Population-Environment Balance Monograph*, 1987.

NOTES

1. For a brilliant analysis of the relevance of the entropy law to economics, see Nicholas Georgescu-Roegen, *The Entropy Law and the Economic Process* (Cambridge, Mass.: Harvard University Press, 1971).
2. *Cartesian Economics* (London, 1922). For an exposition of Soddy's economics and further references, see H. E. Daly, "The Economic Thought of Frederick Soddy," *History of Political Economy*, 12:4, 1980.
3. See Robert Heilbroner and Lester Thurow, *The Economic Problem* (New York: Prentice-Hall, 1981), pp. 127, 135.
4. *The Nature of the Physical World* (New York: Cambridge University Press, 1953), p. 74.
5. H. E. Daly, "The Circular Flow of Exchange Value and the Linear Throughput of Matter-Energy: A Case of Misplaced Concreteness," *Review of Social Economy*, December 1985.
6. See H. E. Daly, ed., *Economics, Ecology, Ethics* (San Francisco: W. H. Freeman Co., 1980), pp. 337-344 and pp. 317-320.
7. For an attempt at persuasion, pp. 56-61.

10

THE CIRCULAR FLOW OF EXCHANGE VALUE AND THE LINEAR THROUGHPUT OF MATTER-ENERGY: A CASE OF MISPLACED CONCRETENESS

Circular Exchange Value and Linear Physical Throughput

Much of modern economic theory derives from the model of the circular flow of exchange value found in the initial pages of almost every economic textbook. This is especially the case for macroeconomics and national income accounting. In this familiar model, value embodied in goods and services flows from firms to households and is called national product. An equal value, reincarnated in factors of production, flows back to firms from households and is called national income. The circular flow model traces exchange value (purchasing power) around its repetitive cycle, back and forth between the two exchanging, decision-making units, one governing production (firms) and one governing consumption (households). Although the physical embodiments differ, the exchange value in the two loops of the cycle is the same because of the principle that both sides of a transaction have equal exchange value (though different use values), along with the inclusion in national income of residually defined profit as the "value" of the noncontractual "factor" of entrepreneurship. As we know from Say's Identity, there must always be, in the aggregate, sufficient income generated in the act of production to buy the total product.

TO: AG
FR: Winston
DT: Tuesday, 5/12/92 9:00 am - 11:30 am
RE: Witnesses for Hearing

- Jim Jeffords
(+ John Chafee)
- (+ Tim Wirth)

This is the most recent list of witnesses for the hearing that I have. I believe Katie and Paul may have switched the order of the panels last night. Katie can update you on changes.

PANEL #1

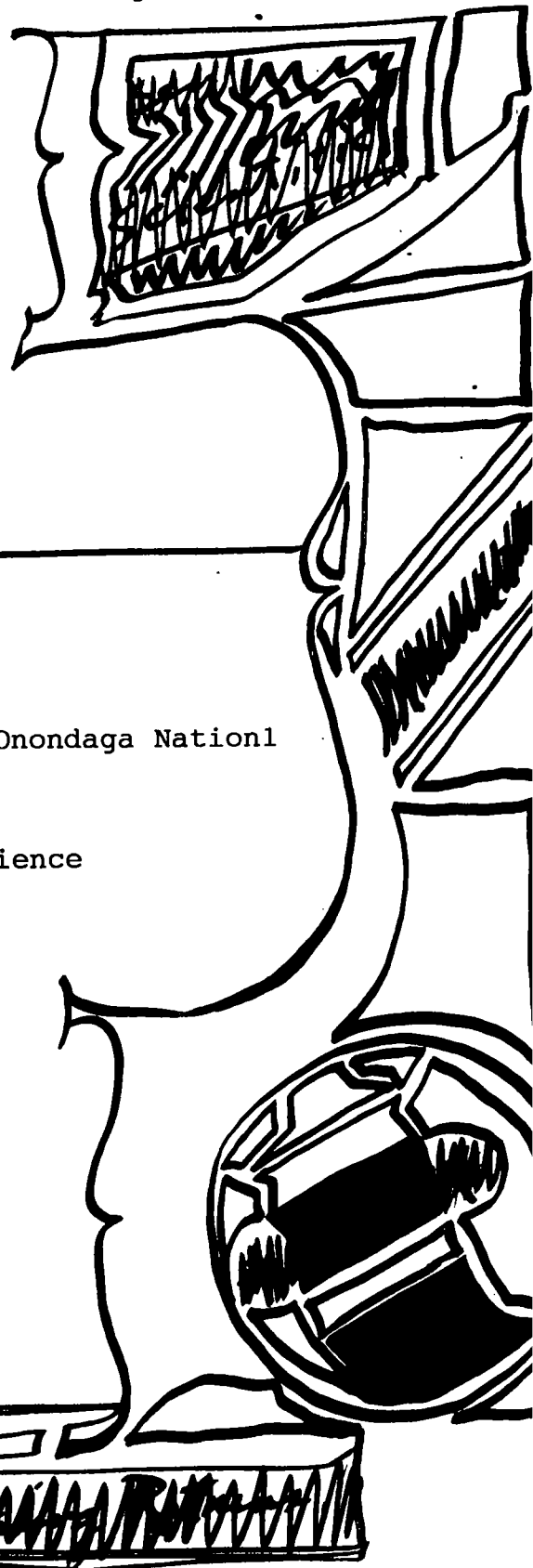
- * Dr. Carl Sagan
Professor of Astronomy
Director, Laboratory for Planetary Studies
Cornell University
- * The Very Reverend James Parks Morton
Dean, Cathedral of St. John the Divine

PANEL #2

- * Rev. Joan Campbell
General Secretary
National Council of Churches
- * Dr. Ismar Schorsch
Chancellor
The Jewish Theological Seminary of America
- * Rev. William Byron
President
Catholic University
- * Chief Oren Lyons
Faithkeeper and Chief of the Turtle Clan, Onondaga Nation
- * Dr. F. Sherwood Rowland
President
American Association for the Advancement Science

PANEL #3

- * Dr. Herman Daly
Senior Economist
World Bank
- * Mr. Art Fitzgerald:
Senior Vice President
Northern Telecom
- * Dr. Mark Sagoff
Center for Philosophy and Public Policy
University of Maryland



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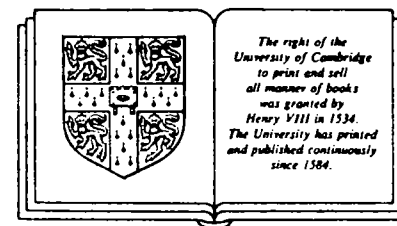
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The economy of the earth

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crowd. Some in the crowd reported that "the sun appeared and seemed to tremble, rotate violently and fall, dancing over the heads of the throng."⁵

The shrine was empty when I visited it. The cult of Our Lady of Fatima, I imagine, has few devotees. The cult of allocative efficiency, however, has many. Where some people see only environmental devastation, its devotees perceive welfare, utility, and the maximization of wealth. They see the satisfaction of wants. They envision the good life.

As I looked from the shrine over the smudged and ruined terrain, I thought of all the wants and needs that are satisfied in a landscape full of honeymoon cottages, commercial strips, and dumps for hazardous waste. I hoped that Our Lady of Fatima, worker of miracles, might serve, at least for the moment, as the patroness of cost-benefit analysis. I thought of the miracle of perfect markets. The prospect, however, looked only darker in that light.

WHAT WE WANT VERSUS WHAT WE ARE

This book concerns the economic decisions we make about the environment. It also concerns our political decisions about the environment. Some people have suggested that, ideally, these should be the same – that every environmental problem should be understood as an economic one. William Baxter, for example, writes, "All our environmental problems are, in essence, specific instances of a problem of great familiarity: How can we arrange our society so as to make the most effective use of our resources?"⁶ He adds:

To assert that there is a pollution problem or an environmental problem is to assert, at least implicitly, that one or more resources is not being used so as to maximize human satisfactions. In this respect at least environmental problems are economics problems, and better insight can be gained by the application of economic analysis.⁷

On this view, there is really only one problem: the scarcity of resources. Environmental problems exist, then, only if

environmental resources could be used more equitably or efficiently so that more people could have more of the things for which they are willing to pay. "To the economist," Arthur Okun writes, "efficiency means getting the most out of a given input." Okun explains: "This concept of efficiency implies that more is better, insofar as the 'more' consists of items people want to buy."⁸

Environmental economists generally define "efficiency" as the "maximum consumption of goods and services given the available amount of resources."⁹ On this approach to environmental policy, it is the preferences of the consumer that are important. "The *benefit* of any good or service is simply its value to a consumer."¹⁰ The only values that count or that can be counted, on this view, are those that a market, actual or hypothetical, can price.¹¹ "In principle, the ultimate measure of environmental quality," one text assures us, "is the value people place on these services . . . or their *willingness to pay*."¹²

Willingness to pay. What is wrong with that? The rub is this. Not all of us think of ourselves primarily as consumers. Many of us regard ourselves as citizens as well. As consumers, we act to acquire what we want for ourselves individually; each of us follows his or her conception of *the good life*. As citizens, however, we may deliberate over and then seek to achieve together a conception of *the good society*.

In a liberal state, we are all free to pursue our personal ideas of the good life, for example, by buying the books we want to read. In a democracy, however, we are also free to pursue our ideal of ourselves as a good society, by trying to convince one another and our political representatives of a particular idea of our national goals and aspirations.

Americans, like citizens of other countries, have national goals and aspirations – a vision of what they stand for as a nation. They believe, for example, that each person must be secure in certain basic rights if he or she is to be able to form preferences that are not merely imposed but are autonomous and express personal values and uncoerced choice. Thus, the freedoms guaranteed by the Constitution are not to be con-

strued as preferences for which they are willing to pay. They are, on the contrary, protections needed to form and express preferences that are truly one's own and that therefore may claim societal recognition and respect.¹³

Americans' conception of their own as a good society, however, includes more than these rights, which, in any event, may be universal and would, perhaps, belong to any good society, not simply theirs. They also recognize in their legislation and, as I shall argue in a later chapter, in their culture – for example, in their literature and art – other national goals and aspirations that are more particular to them. These do not necessarily follow from (although they must be consistent with) an abstract or universal conception of justice or the rights of man. Rather, they may derive from America's history and heritage; they may have to do with the particular role Americans can play in human progress. Americans might object to policies foreign or domestic that benefit them as individuals, if those policies disgrace or depart from national ideals and ethical commitments.

Consumers who have to pay higher prices as a result, for example, nevertheless may favor safety regulations in the workplace, not as a matter of personal self-interest but as a matter of national pride and collective self-respect. I shall argue, likewise, that our environmental goals similarly derive not necessarily from self-interest – not from consumer willingness to pay in markets – but from a common recognition of national purposes and a memory even newcomers adopt of our long historical relationship to a magnificent natural environment.

Our environmental goals – cleaner air and water, the preservation of wilderness and wildlife, and the like – are not to be construed, then, simply as personal wants or preferences; they are not interests to be “priced” by markets or by cost-benefit analysis, but are views or beliefs that may find their way, as public values, into legislation. These goals stem from our character as a people, which is not something we choose, as we might choose a necktie or a cigarette, but something we recognize, something we are.

These goals presuppose the reality of public or shared values we can recognize together, values that are discussed and criticized on their merits and are not to be confused with preferences that are appropriately priced in markets. Our democratic political processes allow us to argue our beliefs on their merits – as distinct from pricing our interests at the margin. Our system of political representation and majority vote may be the best available device for deciding on these values, for “filtering the persuasive from the unpersuasive, the right from wrong, and the good from bad.”¹⁴

WHAT IS COST-BENEFIT ANALYSIS?

In this book, I shall argue that policies for health, safety, and the environment are and ought to be grounded in what Richard Andrews calls the “philosophy of normative constraints.” Andrews explains:

In this conceptual framework, government is not simply a corrective instrument at the margins of economic markets but [a] central arena in which the members of society choose and legitimize . . . their collective values. The principal purposes of legislative action are to weigh and affirm social values and to define and enforce the rights and duties of members of the society, through representative democracy. The purpose of administrative action is to put into effect these affirmations by the legislature, not to rebalance them by the criteria of economic theory.¹⁵

Andrews contrasts this conception of government with one “grounded in the language, logic, and values of public investment economics.”¹⁶ Those who advocate the primacy of the language, logic, and values of public investment economics generally argue that regulatory decisions, insofar as they are rational, must be based on a conception of markets or on a theory about costs and benefits and, therefore, not necessarily on the goals or purposes set out in legislation. These analysts have mounted a strong a priori, or conceptual,

environmental law on the basis of shared ideals rather than on the basis of individual utilities? Why do they find it hard to concede that their society is more than a competitive market and that allocative efficiency and distributional equity do not exhaust their repertoire of public values? Why is it so difficult for them to say that one may allocate resources not always as a perfect market would but on substantive, normative, and frankly ethical grounds?

I think the answers have something to do with the insecurity many of us feel when we find ourselves without "neutral" theories and criteria against which to evaluate political, ethical, and aesthetic positions. It's scary to think about problems on their own terms; it's easier to apply a methodology; it's even more tempting to think about the problems raised by the methodology or to investigate the theory itself. Besides, if one side has numbers, the other may need numbers as well. Because developers tell stories about willingness to pay for recreational opportunities at Mineral King, environmentalists tell stories about option values and amenity costs.

As a result, public officials discuss the meaning of magnificent environments using a vocabulary that is appropriate to measure the degree to which consumers may exploit them. A principal purpose of an environmental ethic may be to help policymakers find more appropriate concepts they can use to think about the goals of public policy and to address the obstacles that stand in the way of those goals. The concepts associated with the principles of allocatory efficiency and distributive equity are not especially suitable for this purpose.

MONEY AND MEANING

The things we cherish, admire, or respect are not always the things we are willing to pay for. Indeed, they may be cheapened by being associated with money. It is fair to say that the worth of the things we love is better measured by our *unwillingness* to pay for them. Consider, for example, love itself. A civilized person might climb the highest mountain,

swim the deepest river, or cross the hottest desert for love, sweet love. He might do anything, indeed, except be willing to pay for it.

The Church once auctioned off indulgences. It sold future shares in heaven at the margin with a very favorable discount rate. Was it a good idea to establish a market in salvation? Of course it was. How else can you determine how much an infinity of bliss, discounted by the probability that God does not exist, is worth?²⁷ The Church membership, however, grew a little disillusioned when it saw that the favors of the Lord were auctioned for silver and gold. This disillusionment was one cause of the Reformation.

The things we are unwilling to pay for are not worthless to us. We simply think we ought not to pay for them.²⁸ Love is not worthless. We would make all kinds of sacrifices for it. Yet a market in love – or in anything we consider "sacred" – is totally inappropriate. These things have a *dignity* rather than a *price*.²⁹

The things that have a dignity, I believe, are in general the things that help us to define our relations with one another. The environment we share has such a dignity. The way we use and the way we preserve our common natural heritage help to define our relations or association with one another and with generations in the future and in the past.

Let me return, now, to the example with which I began. My students, as I said, are pulled one way when they are asked to make a consumer choice whether or not to patronize the Disney resort. That question goes to their wants and desires simply as individuals. They are pulled another way when asked to make a political decision whether the United States should turn wilderness areas into ski resorts. That decision calls upon their conception of the values we share or the principles we respect as a nation.

Should we base environmental policy on the interests individuals may act upon as consumers or on the values that they may agree upon as citizens? Our policy may be "rational" either way. We may have a "rational" policy in an economic sense if we limit the role of law to that of protecting

rights and correcting market failures. We should then assume that the ends of policymaking are simply "given" in the preferences consumers reveal or would reveal in a market. Alternatively, we might suppose that a "rational" policy advances a certain conception of equality – or meets some other condition or criterion laid down in advance.

We may have a policy that is rational in what we may call a deliberative sense, however, if we strive to base law on principles and ideals that reflect our best conception of what we stand for and respect as a nation. This kind of rationality depends on the virtues of collective problem solving; it considers the reasonableness of ends in relation to the values they embody and the sacrifices we must make to achieve them. This deliberative approach respects the constitutional rights that make it possible for people to contribute as equals to the political process, but it asserts no *a priori* political theory about the purposes of public policy.

This approach assumes, on the contrary, that the values on which we base social policy are objects of public inquiry. They are not to be derived (as they would be in a market) by aggregating exogenous preferences, or (as they might be in a political philosophy) from metaphysical truths about the nature of persons. Thus, the general goals of public policy are to be determined through a political process in which citizens participate constrained only by rights of the kind protected by the Constitution. These goals are not known beforehand by a vanguard party of political economists or by an elite corps of philosopher-kings.

COMPROMISE AND COMMUNITY

The students in the class I taught had no trouble understanding the difference between the judgments they make as citizens and the preferences they entertain as individuals. They also understood the importance of their "positive" freedom to lobby for their views politically and their "negative" freedom to pursue their personal interests without undue interference from the state.³⁰ Plainly, these freedoms, like

these values and preferences, are bound to come into tension or conflict. If the nation preserves every mountain as a wilderness heritage, there will be no place for these young people to ski.

This tension has been a central problem for political theories of liberalism. As one historian writes: "Liberalism of all sorts [in America] is troubled by the seemingly contrary pulls of responsibility to individual and community, by the divergent demands of absolute adherence to the doctrine of individual integrity and the needs and potentials of the common life."³¹ In Chapter 7, I shall deal extensively with the problems liberals face in reconciling communitarian goals, for example, protecting wildlife, with what some see as an individualistic political philosophy. I shall argue that liberals are not constrained by their political theory to support only those communitarian policies they can justify as necessary to satisfy the interests or protect the rights of individuals.

The students in my class found it fairly easy to resolve the tension between their consumer interests and their public values with respect to the example of Mineral King. They recognized that private ownership, individual freedom of choice, and the profit motive (to recall the remarks of Dr. Kneese I quoted in the Introduction) would undoubtedly lead to the construction of the Disney paradise. They reasoned, nevertheless, that we should act on principle to preserve this wilderness, which has an enormous cultural meaning for us, since the resort, though profitable, would not serve important social ends. The students argued that because there are a lot of places for people to party, we do not need to make a ski resort of Sequoia National Park.

But what if the stakes were reversed? What if we should have to make enormous financial sacrifices to protect an environmentally insignificant landscape? Suppose industry would have to pay hundreds of millions of dollars to reduce air pollution by a small, perhaps an insignificant, amount? The students in my class, by and large, answered these questions the way they answered questions about Mineral King.

priced so that the decision makers may deal with them in political and ethical rather than in economic terms? Is the problem simply technical – nobody knows how to create property or other rights in these values; no one knows how to establish a market in political and moral costs and benefits? Should we think of the Wyoming economists as pioneers, then, whose experimental devices may have been primitive but who blazed paths in the right direction?

Is the problem, on the other hand, not technical but logical? Is it a matter of principle, not merely of methodology, that the beliefs and opinions of citizens are usually listed and treated separately from their consumer interests and preferences? Is it a logical or conceptual truth, in other words, that ideas or convictions that can be supported by reasons in the political process are to be considered by the decision maker as different from consumer wants and interests that may be satisfied in markets? If so, if the limitation is logical, if political and ethical debates are conceptually different from economic analyses, then we must infer that efforts to shadow-price “intangible” or “fragile” values must fail – not for any technical or empirical reason but because they rest on a logical mistake. The next section explains what I suppose this mistake to be.

A CATEGORY MISTAKE

The idea of “pricing” moral and ideological beliefs as if they were externalities might look attractive, at first, to environmentalists. A wilderness lover might find it heartening that his hand-wringing and teeth-gnashing are not entirely in vain. His misery will be priced among the costs of any commercial plan to exploit the nation’s forests and parks. Such an environmentalist, indeed, may find an incentive in this to tear his hair a little more than otherwise, thinking, perhaps, that every strand will be weighed in the final cost-benefit account.

I understand that meters that measure gooseflesh and sweaty palms have been used by firms to determine the

emotional response to their advertisements. Perhaps galvanometers, along with electrodes that measure brainwaves, could be used by analysts to measure the ethical costs and benefits of public investments. Public policy could then be based on neutral, scientific, and objective evidence about exogenous visceral and neurological states.

However neutral and scientific this approach may appear to be, however, the environmentalist should be wary of it. It may turn out that no matter how much gooseflesh, sweat, or migraine the partisan of preservation generates, compensating consumer benefits may, nevertheless, justify a controversial project. The environmentalist may be told it is cheaper for him to avert his gaze or forget his commitment than it is for society to give way to his frenzy. Then the environmentalist is left defending “intangibles” that seem rather conjectural in comparison to the hard-cash value of development.

The ability to find “free rider” problems, unpriced values, and transaction costs in every doorway and under every stone, moreover, undermines the credibility of market analysis. I think Professor Heller’s article suggests that a clever analyst could justify any law or rule as efficient. If a constituency exists for a law, then, I should suppose, there are a lot of people who want it. The rest is easy. All you need to do is identify a “moral” externality, talk about free-rider problems, aggregate willingness to pay, and then say that the benefits of the legislation exceed the costs.

This criticism, however, may be construed as simply a technical one: It may only show that the attempt to shadow-price public values or “citizen” preferences faces insuperable problems in measurement. This objection, by now, is commonplace, and it is not the one I wish to make. I wish to argue that the attempt to shadow-price public values as externalities of private transactions involves a category mistake.⁴⁵

This is the kind of mistake you make when you predicate of one concept another that makes no sense in relation to it. If I say that the square root of two is blue, for example, I

have not uttered a meaningful sentence but an absurdity, since color concepts are not of a logical type that can meaningfully be predicated of numbers. Likewise, if I tell you the window wants to be closed, you would not take me literally to attribute a psychological state to an inanimate thing, which would be an absurdity. Again, to ask for the name and address of the average American family is to ask a silly question. It is to be confused about the qualities that can meaningfully be attributed to an object and to commit, in that sense, a category mistake.

Private and public preferences also belong to different logical categories. Public "preferences" involve not desires or wants but opinions or views. They state what a person believes is best or right for the community or group as a whole. These opinions or beliefs may be true or false, and we may meaningfully ask that person for the reasons that he or she holds them. But an analyst who asks how much citizens would pay to satisfy opinions that they advocate through political association commits a category mistake. The analyst asks of beliefs about objective facts a question that is appropriate only to subjective interests and desires.

When an environmentalist argues that we ought to preserve wilderness areas because of their cultural importance and symbolic meaning, he or she states a *conviction* and not a *desire*. When an economist asserts that we ought to attain efficient or optimum levels of pollution, he or she, too, states a belief. Those who argue in favor of or against a public policy likewise wish their views to be heard and understood; they seek a response to the arguments they make. What is more, they may believe that their citizenship in a democratic society gives them the right to such a hearing and response, and this is not what happens even in the most efficient market.⁴⁶

People who argue for or against the teaching of creationism in the public schools, for example, believe that the scientific views they contend about are crucial. What matters is how well these views are supported by the objective evidence. The creationists are able to raise a great deal of money, but no one, not even they, contend that the intensity with which

people hold beliefs or the money they spend to publicize them indicates the cogency of their intellectual position. It is the cogency of the arguments, not how much partisans are willing to pay, moreover, that offers a credible basis for public policy.

THE DEMOCRATIC ALTERNATIVE

The blurring of the distinction between private interests and the public interest – and, therefore, between the competition of preferences and the contradiction of ideas – produces results that we should do well to avoid. First, the policymaker, employing the willingness-to-pay criterion, attempts to remain neutral among contending positions. As a result, the analyst would grant equal initial credibility to every position. For example, the policymaker, if "efficiency" is his goal, should take creationism seriously because its partisans are willing to pay a great deal for it to be taught in public schools. This approach, indeed, may favor the silliest views over the most sensible because, as Yeats wrote, "the best lack all conviction, while the worst are full of passionate intensity."⁴⁷

The analyst, however, is unlikely to recognize silly, preposterous, or violent beliefs; he or she is unlikely to shadow-price preferences like those of Oscar the Grouch. Indeed, the analyst may rule out of consideration, either because they are "envious" and "meddling"⁴⁸ or, perhaps because they are "misinformed," views that are plainly ludicrous, malevolent, or stupid. These attempts to "launder preferences," to use Robert Goodin's excellent phrase,⁴⁹ may merely mark an underlying confusion between preferences that may be "priced" and values that are to be heard, considered, criticized, and understood. Once we recognize this distinction, we may no longer need to find technical grounds for "screening" preferences. We can dismiss racist, superstitious, and downright preposterous ideas as such.

Second, the willingness-to-pay approach to public policy removes the basis of legitimacy from the political process. I do not mean merely that it crushes the "cherished illusion"

that policy comes from the minds of elected officials in Congress rather than from the computers of economists in the back room. I refer, rather, to the fact that cost-benefit approaches deal only with values or preferences already extant in society. A political process – a process of debate and compromise – is supposed to be creative. The ability of the political process to cause people to change their values and to rise above their self-interest is crucial to its legitimacy. Political participation is supposed to educate and elevate public opinion; it is not, like economic analysis, supposed merely to gratify preexisting desires.

A third likely consequence in public policy may be the most disastrous. Economic analysis tends to limit conflict to those parties who have something at stake for which they are willing to pay. This approach would prevent the socialization of conflict that is crucial to the functioning of a democracy.

Consider an example. Suppose a corporation proposes and an environmentalist group opposes the building of a shopping center in a rural area just outside of town. An economist might make a recommendation based on prices assigned to the various wants or preferences of relevant interest groups. This would effectively limit conflict to the immediate parties who know about and are affected by the project. The genius of democracy, however, is to let the conflict spread to a larger audience.

The institutions of democratic government – legislatures, agencies, parties, courts, and the press – depend and thrive on the potential for conflicts of this kind to widen beyond their original bounds. This happens when one side – usually the side that otherwise would be defeated – finds a public issue (e.g., a “snail darter”) and moves the conflict into the press, the legislature, and the courts. The decision-making process then may become a kind of public good, since it allows everyone who participates in it the feeling of relevance, importance, and community-consciousness flowing from that participation.

This might seem grossly inefficient, and perhaps it is, but it is what democratic government is all about.⁵⁰ An alternative

– technocracy – quarantines or localizes conflict so that it can be resolved by the application of some mechanical rule or decision procedure. Cost-benefit approaches to public policy, if taken to their extreme, would do this, and thus they would substitute themselves for the processes of democratic government. The genius of cost-benefit analysis is to localize conflict among affected individuals and thereby to prevent it from breaking out into the public realm.

This suggests that the reason industry favors economic approaches to public policy is not necessarily the obvious one, namely, that cost-benefit analysis is sensitive to the costs of regulation. The deeper reason may be that cost-benefit analysis defines a framework for conflict that keeps the public qua public and the citizen qua citizen out. This characteristic of the cost-benefit framework – that is is antithetical to democracy – seems to have led analysts to try to take “citizen” values into account. This attempt fails, however, to get at the bottom of the problem. The deliberative rationality of democracy is just not like the interest-balancing rationality of markets.

CONCLUSION

Environmental law poses a severe test for economic approaches to public policy. “Disagreements over degrees of environmental protection,” one writer has correctly surmised, “are not about relative costs and benefits but about the validity of economics itself as a form of interaction – its basis in exchange, costs, and cash – as a measure of the way we ought to relate to one another.”⁵¹ To notice that statutes like the Endangered Species Act, the Clean Air Act, and so on are not cost-beneficial is to recognize the obvious. That is the *point* of these laws, and of much of our environmental legislation.

These laws demonstrate that we are not consumers simply bent on satisfying every subjective preference. We insist upon our role as citizens as well. And, as citizens, we adopt a model of government and a vision of political life that allow

us to posit collective values and to give effect to our national conscience and common will.

I do not pretend to assess the merits of the argument I have made here. I only want to point out that it *is* an argument. I did not treat the position many policy analysts defend as if it were merely their private preference. I did not survey economists to find out how much they were willing to pay to have their views about efficiency implemented. Why, then, do some economists survey environmentalists to find out how much they would pay to keep a vista clear or a river pure? Why do these economists believe that opinions that oppose theirs deserve a price and not a reply?

The role of the policymaker, indeed, of the legislature – and derivatively the role of the courts – may be to balance what we believe in and stand for as a community with what we want and need to achieve as a functioning economy. The problem may be to devise some way that we can relate to one another as members of a community in search of common ideals and, at the same time, compete and cooperate with each other in a market to satisfy individual interests.

The future of social policy rests on the resolution of conflicts of this kind. It is not just a matter of balancing interests with interests; it is a matter of balancing interests with morality and balancing one morality with another morality. In later chapters, I shall offer some suggestions about how *this* sort of balancing may be done.

Chapter 5

Values and preferences

A *New Yorker* magazine cartoon depicts the Devil introducing newcomers to hell. "You'll find there's no 'right' or 'wrong' here," he tells them, "just what works for *you*."

This cartoon could serve as a frontispiece in a textbook that introduces students to policy analysis and management. In *A Primer for Policy Analysis*, Edith Stokey and Richard Zeckhauser, for example, put forward the principle (ironically like the caption of the cartoon) that "individual welfare is all that matters in policy choices."¹ The individual's preferences, these authors say, constitute the standard or criterion by which we are to judge his or her well-being. "In the United States, we usually take the position that it is the individual's own preferences that count, that he is the best judge of his own welfare."²

The Devil and the policy analyst agree, then, that individual welfare is what matters in social regulation. The Devil tries to make people as miserable as possible; his goal is to defeat or frustrate preferences insofar as he can. The policy analyst, on the contrary, strives to increase overall welfare insofar as possible by recommending policies that maximize the satisfaction of preferences over society as a whole. Might the recommendations of the policy analyst be good, then, for the very reasons that the Devil's actions are evil?

This chapter discusses whether efficiency, as a goal or as a criterion for social regulation, has a normative or an ethical basis. I shall consider whether the efficiency criterion has any connection with a substantive conception of welfare, for ex-

Global Environmental Change Report

POLICY, SCIENCE AND INDUSTRY NEWS WORLDWIDE, FROM CUTTER INFORMATION CORP.

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Focus Report

From a Million Kilograms to Nearly Zero in Three Years: How Northern Telecom Cut the Cord on CFCs

On 30 November, Northern Telecom Ltd. became CFC-113-free. The \$6.8 billion Canadian-based telecommunication systems supplier began its CFC and halon reduction program in mid-1988, when its facilities worldwide were using one million kilograms of ozone-depleting chemicals annually. Three years later, it has cut that figure to virtually zero, having eliminated CFC-113 entirely and greatly reduced its consumption of other CFCs and halons. At the recent International CFC and Halon Alternatives Conference in Baltimore, Maryland, USA, Northern Telecom received the US Environmental Protection Agency's (EPA) Stratospheric Ozone Award for its achievement.

How did the company do it? *GECR* asked Art Fitzgerald, Northern Telecom's assistant vice president for environmental affairs, to outline the phaseout process and explain why the corporation decided to move so quickly on CFCs. Fitzgerald, who has been working in the environmental field for 22 years, says he has always believed that environmental issues can represent opportunities for business rather than problems, and he approached the CFC case in the same way.

"When the Montreal Protocol was signed off in September 1987," Fitzgerald told *GECR*, "I went to Victor Buxton at the Canadian environment ministry, and asked, 'What do we have to do to get this going quickly, what does it mean to a company like Northern Telecom, and who do I have to speak with at the EPA?' Vic directed me to Steve Anderson at the EPA. I had a meeting with Steve in December 1987 and told him that we were thinking about kickstarting the phaseout and doing it fast." In January 1988, Fitzgerald performed a company-wide survey, where he learned that Northern Telecom was purchasing about a million kilograms a year of CFCs and halons, 97% of which was CFC-113. In March, he coordinated a workshop with 70 Northern Telecom manufacturing and

process officials, in which Buxton and Anderson were asked to "take off their jackets, roll up their sleeves, and help us in a partnership arrangement, to hammer out a solid program for Northern Telecom to go quickly on this issue."

Later that year, the company set up a CFC task force comprising three subcommittees. "The first subcommittee was charged with moving quickly in identifying how we could reduce consumption through conservation and recycling; the second was charged with finding the longer-term solutions, the alternative technologies and processes; and the third subcommittee worked on 'external interface,' striking up relationships with the EPA, the ad-hoc solvents committee that's looking at revising the military specifications [on circuit boards], the United Nations Environment Programme's subcommittee on solvent use, and so on. The idea here was to take advantage of knowledge and information that was developing elsewhere."

In the task force process, Fitzgerald and his colleagues started from first principles, asking technicians to explain why they used CFC-113 to clean circuit boards, and even why they needed to clean the boards in the first place. They involved Northern Telecom customers to ensure that the company's solutions would be acceptable. After testing the gamut of alternatives, including aqueous cleaning, semi-aqueous cleaning, alcohol, HCFCs, and others, the task force decided that Northern Telecom should switch to "no-clean" low-solid flux and paste technology. There was some initial concern that the no-clean option would be risky — after all, boards are cleaned because fluxes tend to leave a residue that may corrode lines and components under certain temperature and humidity conditions. But when the company performed long-term reliability tests (which Fitzgerald says complied with "all our customers' requirements and all of the industry stan-

dards"), it found that boards manufactured with no-clean technology should indeed perform reliably for at least 40 years.

Because the switch to no-clean technology was a fairly straightforward operation, Northern Telecom was able to give up CFC-113 quickly, and it requires its subsidiaries to do the same. "When we started the program in early 1988, we had 42 plants and R&D facilities, and we pledged that we would stop using CFC-113 — both as a solvent and in miscellaneous uses — in all of them by 1991. Those 42 have met the goal. Since 1988 we have acquired two other plants; they also met the 1991 commitment. We also built two new plants during that period, which are running CFC-113-free and started up that way. And earlier this year, we bought STC [a corporation in the UK], which had 15 plants that were using CFC-113 ... Up until a couple of days ago, 8 of the 15 had already achieved CFC-113-free status, and I got word [on 12 December] that another 2 or 3 have been added to that list.

"When I claim that we're CFC-113-free, that applies to the original corporation. Obviously, every time we buy a company or plant, we get in the situation where we're no longer CFC-free. But our policy now is that if we buy a company, it will have no more than 15 months to get itself out of this solvent."

What about cost? "As it turned out, in a three-year program we had spent something on the order of \$1 million, including some R&D time and some equipment purchases, while in the course of that period we saved \$4 million. The savings are in terms of no solvent or less solvent to be purchased, no waste or less waste to dispose of, and doing away with equipment. You don't have the capital investment sitting there, you don't have a need for maintenance, you don't have a need for the electricity, and you free up some floor space that you can use for

other purposes." If Northern Telecom had continued to use CFC-113 at its 1988 level until the end of 1999, Fitzgerald told *GEER*, it would have cost the company some \$75-\$80 million. "You can make a solid business case on this kind of thing," he says.

While 97% of Northern Telecom's CFC use was in CFC-113, the company had also pledged to reduce its consumption of other ozone-depleting chemicals. Two-thirds of the remaining 3% was replacement refrigerants, and the rest was halons. "At the time of the company survey," Fitzgerald says, "we had about 1,600 or 1,700 hand-held halon fire extinguishers throughout the organization worldwide, and we had about 50,000 kg of halon in total flooding systems for the protection of central office switches and computer rooms. We made a decision to stop buying halons, and to use them only in accordance with company guidelines that were subsequently developed.

"We sat down with our insurers and said, 'What is acceptable and what is not acceptable from a risk and cost point of view?' We determined that we did not need any hand-held halon extinguishers, so we removed them from service, and struck arrangements with suppliers to take them back and redeploy them to essential users. On total flood systems, our insurers agreed that only facilities or installations that had a value of more than \$5 million would be protected with halon total flood systems. If the value fell below that cutoff point, then the halon could be decommissioned. Hand-held extinguishers were replaced with CO₂ and dry powder extinguishers. Total flood systems were replaced by water sprinklers. I don't think we have more than three or four total flooding systems left in the organization."

On 10 January, all of Northern Telecom's operations will be celebrating their phasout of CFCs.

Fitzgerald says his company has produced a 15-minute video documenting the phaseout process, and it has contracted with California artist Tom Van Sant to produce 60,000 posters and 70 hologram wall hangings portraying his composite satellite image of the Earth without cloud cover — a picture that Northern Telecom is calling "A Clear Day." The posters will go to Northern Telecom staff, and the wall hangings will go in the front lobbies of Northern Telecom manufacturing sites.

With the CFC issue resolved, Fitzgerald is setting his sights on

product lifecycle management. He's taking other initiatives as well: Northern Telecom has already issued internal guidelines on waste minimization, and will unveil energy management guidelines next month to begin reducing its CO₂ emissions.

Northern Telecom's ability to switch to no-clean technology was a major factor in its speedy phaseout of CFC-113. Not all circuit-board manufacturers have the luxury of this option, particularly if they are supplying equipment to the military. But Fitzgerald believes that others can follow his company's example. The

secret behind Northern Telecom's success in environmental matters, Fitzgerald says, is a combination of management commitment and a willingness among its employees to participate. "There was management commitment from the earliest part of the CFC program. We even published quarterly reports on all our locations. There became almost an internal competition between locations to see who could move up the ladder fastest. And then we had a handful of people who took it on as a challenge." Any company, Fitzgerald says, can do the same thing if it has those ingredients.

TO: AG

FR: Winston

DT: 5/10/92

RE: Briefing information for Hearing

KATIE PUT BACKGROUND INFORMATION FOR THE HEARING IN YOUR BRIEFING BOOK ON FRIDAY. IT NEEDS TO BE TRANSFERRED TO THIS NOTEBOOK.

SHE AND MARK CHUPKA ARE WORKING ON QUESTIONS AND STATEMENT BULLETS. SHE WILL GET THEM TO YOU TOMMORROW.

DELEGATION TO SENATOR HATFIELD TUESDAY MAY 12 9:30 AM

Mr. Syed Imtiaz Ahmad
President, Islamic Society of North America

Bishop Edmond L. Browning
Presiding Bishop, Episcopal Church USA

Bishop Herbert W. Chilstrom
Bishop, Evangelical Lutheran Church in America

Ms. Ann Druyan
Secretary, Federation of American Scientists

The Most Reverend William B. Friend
Chairman, Committee on Science and Human Values
National Conference of Catholic Bishops

Dr. Stephen Jay Gould
Harvard University

Dr. Thomas F. Malone
University Distinguished Scholar, Department of Marine, Earth and
Atmospheric Sciences, North Carolina State University

Dr. Henry Kendall
Chairman, Union of Concerned Scientists

Dr. Richard Land
Executive Director, Christian Life Commission
Southern Baptist Convention

Reverend W. Franklyn Richardson
General Secretary, National Baptist Convention

Mr. Steven C. Rockefeller
Vice Chairman, Rockefeller Brothers Fund

Dr. John Ruskay
Vice Chancellor, Jewish Theological Seminary of America

Rabbi Alexander Schindler
President, Union of American Hebrew Congregations

F-11

Maurice Strong called
for a copy of Yentler
(sanctioned on TV).
letter to bring w/ him
to Bush meeting.....

M E M O R A N D U M

DATE: 5/6/92

TO: KM, HWM

FROM: LKS

SUBJECT: Members to attend Valuing the Environment Hearing

Senator Bryan--Anne skd/Tim Hay LA
fax 4-1867 ph 4-6224
10:15

Senator Danforth--Mark Solomon LA
fax 4-0952 ph. 4-6154
9:30

Sen. Durenberger--Julie skd/Jeff Cotter LA
fax 4-9931 ph 4-3244
10:00 (30min)

Sen. Jeffords--Trescia skd/John LA
fax 4-5468 ph 4-5141
?????? call mon

Sen. Leahy--Kevin skd/Luke Albe LA (temp)
fax 4-3595 phone 4-4242
10-10:30

Sen. Lieberman--Barbara Chapman skd/Barbara Cairns LA
fax 4-9750 phone 4-4041
10:30-11:30

Sen. Mikulski--Ann Norton skd/Greg Loder enviro LA
fax 4-8858 phone 4-4654
10:30

Sen. Reid--Margaret Stout skd/Gwen Griffith LA
fax 4-3467 ph. 4-3542
9-9:25

Senator Wellstone--Dick skd/Karl Gawell LA
fax 4-8438 ph 4-5641
9:30-10

Sen. Wirth--Dave Harwood LA
fax 4-1933 ph 4-5852
???

Cong. Boehlert--Dorothy skd
fax 5-1891 phone 5-3665

9:30

Cong. Bill Green--Ann skd/Beth Meyers or Susan Persons
Enviro LA
fax 5-0840 phone 5-2436
come by either before 10 or after 11.

Cong. Olympia Snow--Clark Le Blanc
fax 5 8297 phone 2463 Rayburn
????

DECLARATION OF THE "MISSION TO WASHINGTON"

JOINT APPEAL BY RELIGION AND SCIENCE

FOR THE ENVIRONMENT

WASHINGTON, D.C. MAY 12, 1992

We are people of faith and of science who, for centuries, often have traveled different roads. In a time of environmental crisis, we find these roads converging. As this meeting symbolizes, our two ancient, sometimes antagonistic, traditions now reach out to one another in a common endeavor to preserve the home we share.

We humans are endowed with self-awareness, intelligence and compassion. At our best, we cherish and seek to protect all life and the treasures of the natural world. But we are now tampering with the climate. We are thinning the ozone layer and creating holes in it. We are poisoning the air, the land and the water. We are destroying the forests, grasslands and other ecosystems. We are causing the extinction of species at a pace not seen since the end of the age of the dinosaurs. As a result, many scientific projections suggest a legacy for our children and grandchildren of compromised immune systems, increased infectious disease and cancer rates, destroyed plants and consequent disruption of the food chain, agriculture damaged from drought and ultraviolet light, accelerated destruction of forests and species, and vastly increased numbers of environmental refugees. Many perils may be still undiscovered. The burdens, as usual, will fall most cruelly upon the shoulders of the poorest among us, especially upon children. But no one will be unaffected. At the same time, the human community grows

by a quarter of a million people every day, mostly in the poorest nations and communities. That this crisis was brought about in part through inadvertence does not excuse us. Many nations are responsible. The magnitude of this crisis means that it cannot be resolved unless many nations work together. We must now join forces to that end.

Our own country is the leading polluter on Earth, generating more greenhouse gases, especially CO₂, than any other country. Not by word alone but by binding action, our nation has an inescapable moral duty to lead the way to genuinely effective solutions. We signers of this declaration --- leaders in religion and science --- call upon our government to change national policy so that the United States will begin to ease, not continue to increase, the burdens on our biosphere and their effect upon the planet's people.

We believe that science and religion, working together, have an essential contribution to make toward any significant mitigation and resolution of the world environmental crisis. What good are the most fervent moral imperatives if we do not understand the dangers and how to avoid them? What good is all the data in the world without a steadfast moral compass? Many of the consequences of our present assault on the environment, even if halted today, will take decades and centuries to play themselves out. How will our children and grandchildren judge our stewardship of the Earth? What will they think of us? Do we not have a solemn obligation to leave them a better world and to insure the integrity of nature itself? Insofar as our peril arises from a neglect of moral values, human pride, arrogance, inattention, greed, improvidence, and a penchant for the short-term over the long, religion has an essential role to play. Insofar as our peril arises from our ignorance of the intricate interconnectedness of nature, science has an essential role to play.

Differences of perspective remain among us. We do not have to agree on how the natural world was made to be willing to work together to preserve it. On that paramount objective we affirm a deep sense of common cause.

Commitment to environmental integrity and justice, across a broad spectrum and at the highest level of leadership, continues to grow in the United States religious community as an issue of utmost priority --- significantly as a result of fruitful conversations with the scientific community. We believe that the dimensions of this crisis are still not sufficiently taken to heart by our leaders, institutions and industries. We accept our responsibility to help make known to the millions we serve and teach the nature and consequences of the environmental crisis, and what is required to overcome it. We believe that our current economic behavior and policies emphasize short-term individual material goals at the expense of the common good and of future generations. When we consider the long-term as well as the short-term costs, it seems clear that addressing this problem now rather than later makes economic as well as moral sense. We impoverish our own children and grandchildren by insisting that they deal with dangers that we could have averted at far less cost in resources and human suffering.

We reaffirm here, in the strongest possible terms, the indivisibility of social justice and the preservation of the environment. We also affirm and support the indigenous peoples in the protection and integrity of their cultures and lands. We believe the wealthy nations of the North, which have historically exploited the natural and human resources of the Southern nations, have a moral obligation to make available additional financial resources and appropriate technology to strengthen their capacity for their

own development. We believe the poor and vulnerable workers in our own land should not be asked to bear disproportionate burdens. And we must end the dumping of toxic waste materials disproportionately in communities of low income and of people of color. We recognize that there is a vital connection between peacemaking and protecting our environment. Collectively, the nations of the world spend one trillion dollars a year on military programs. If even a modest portion of this money were spent on environmental programs and sustainable economic development we could take a major step toward environmental security.

We commit ourselves to work together for a United States that will lead the world in the efficient use of fossil fuels, in devising and utilizing renewable sources of energy, in phasing out all significant ozone-depleting chemicals, in halting deforestation and slowing the decline in species diversity, in planting forests and restoring other habitats, and in realizing worldwide social justice. We believe there is a need for concerted efforts to stabilize world population by humane, responsible and voluntary means consistent with our differing values. For these, and other reasons, we believe that special attention must be paid to education and to enhancing the roles and the status of women.

Despite the seriousness of this crisis, we are hopeful. We humans, in spite of our faults, can be intelligent, resourceful, compassionate, prudent and imaginative. We have access to great reservoirs of moral and spiritual courage. Deep within us stirs a commitment to the health, safety and future of our children. Understanding that the world does not belong to any one nation or generation, and sharing a spirit of utmost urgency, we dedicate ourselves to undertake bold action to cherish and protect the environment of our planetary home.

SIGNATORIES

Dr. Diane Ackerman
Poet, Naturalist, Author

Dr. John F. Ahearne
Executive Director, Sigma Xi

Dr. Richard Cartwright Austin, S.T.D.
Environmental Theologian with
Appalachian Ministries Educational Resource Center

Dr. Ian Barbour
Professor Emeritus, Religion Department, Carlton College

Reverend James Bell
Executive Director, Interfaith IMPACT for Justice and Peace

The Reverend Thomas Berry
Director, Riverdale Center for Religious Research

Dr. Alan Betts
Atmospheric Research

Sally Grover Bingham
California Diocese: Environmental Commission
Episcopal Church

Dr. Elizabeth Bowen
Representative, National Spiritual Assembly of the Bahai's of the United States
President-Elect, Physicians for Social Responsibility
Assistant Professor of Family Medecine, Morehouse School of Medecine

The Most Reverend Edmond L. Browning
Presiding Bishop, Episcopal Church of America

Reverend William J. Byron, S.J.
President, The Catholic University of America

Reverend Joan Campbell
General-Secretary, National Council of Churches of Christ

Mr. John Carr
Secretary for Department of Social Development and World Peace
United States Catholic Conference

The Rt. Reverend Frank S. Cerveny
Bishop of The Diocese of Florida, Episcopal Environment Commission

Dr. Charles Chambers
Executive Director, American Institute of Biological Sciences

Dr. Audrey Chapman
Program Director for Science and Human Rights
American Association for the Advancement of Science

Reverend Dr. Benjamin F. Chavis, Jr.
Executive Director of the Commission for Racial Justice
United Church of Christ

The Reverend Dr. Herbert W. Chilstrom
Bishop, Evangelical Lutheran Church in America

Dr. Eric Chivian
Professor of Psychiatry, Harvard Medical School
Psychiatrist, Massachusetts Institute of Technology
Co-Founder, International Physicians for the Prevention of Nuclear War

Father Drew Christiansen, S.J.
Director, Office of International Justice and Peace
United States Catholic Conference

Mr. Robert H. Cory
Quaker United Nations Office

Mr. Herman Daly
Senior Economist, World Bank

Dr. Calvin DeWitt
Director, Au Sable Institute of Environmental Studies

Ms. Ann Druyan
Secretary, Federation of American Scientists &
Senior Consultant, Joint Appeal by Religion and Science for the Environment

Reverend Dr. Milton Efthimou
Ecumenical Officer
Greek Orthodox Archdiocese of North and South America

Mr. Warren Eisenberg
Director of the International Council, B'nai B'rith

Mr. Joseph Fitzgerald
Executive Director, National Catholic Rural Life Conference

Ms. Susan Fletcher
Senior Analyst in International Environmental Policy
Congressional Research Service

Ms. Amy Elizabeth Fox
Associate Director, Joint Appeal by Religion and Science for the Environment

Dr. Jerome Frank
Professor Emeritus, Department of Psychiatry and Behavioral Sciences
Johns Hopkins University Hospital

The Most Reverend William B. Friend
Chair, Committee on Science and Human Values
National Conference of Catholic Bishops
Bishop of Shreveport

Mr. George T. Frampton Jr.
President, The Wilderness Society

Reverend Dr. William Gardiner
Director of the Department of Social Justice, Unitarian Universalist Association

Dr. Arthur Green
President, Reconstructionist Rabbinical College

Dr. Lester Grinspoon
Associate Professor of Psychiatry, Harvard Medical School

Mr. Paul Gorman
Executive Director, Joint Appeal by Religion and Science for the Environment

Dr. James Hansen
Director, Goddard Institute for Space Studies

Mr. Jaydee R. Hanson
Assistant General-Secretary, Ministry of God's Creation, United Methodist Church

Dr. John Haught
Chairman of the Department of Theology, Georgetown University

Dr. Raymond Hayes
Chairman of the Department of Anatomy, Howard University

Professor Theodore Hiebert
Associate Professor of Hebrew Bible/Old Testament, Harvard Divinity School

Reverend Theodore M. Hesburgh CSC
President Emeritus, University of Notre Dame

Dr. Roberta Hestenes
President, Eastern College

Reverend Gilbert Horn
Executive Director, Colorado Council of Churches

Reverend Father Vertanes Kalayjian
Diocese of the Armenian Church

Mrs. Annette Kane
Executive Director, National Council of Catholic Women

Dr. Henry Kendall
Stratton Professor of Physics, Massachusetts Institute of Technology
Chairman of the Board, Union of Concerned Scientists

Ms. Kaye Kiker
Member, Executive Board, National Toxics Campaign

Dr. Gail Buchwalter King
Associate Director for Program Services, Association for Theological Schools

Dr. Richard D. Land
Executive Director, Christian Life Commission of the Southern Baptist Convention

Dr. Dan Lashof
Senior Project Scientist, Natural Resource Defense Council

Dr. Harold Lohr
Retired Bishop, Northwestern Minnesota Synod, Evangelical Lutheran Church in America

Chief Oren Lyons
Faithkeeper and Chief of the Turtle Clan, Onondaga Nation

Professor Wangari Maathai
Founder, Kenyan Green Belt Movement

Dr. Jerry Mahlman
Director, Geophysical Fluid Dynamic Laboratory
United States Department of Commerce

Most Reverend James M. Malone
Chair, Domestic Policy Committee
United States Catholic Conference
Bishop of Youngstown

Dr. Thomas F. Malone
University Distinguished Scholar
Department of Marine, Earth and Atmospheric Sciences
North Carolina State University

Dr. Jessica Tuchman Matthews
Vice President, World Resources Institute

Sister Catherine McNamee
President, National Catholic Educational Association

Mr. Alden Meyer
Director, Climate Change and Energy Program
Union of Concerned Scientists

Reverend Charles Miller
Executive Director, Division of Church and Society
Evangelical Lutheran Church in America

Reverend Dr. Donald E. Miller
General Secretary, Church of the Brethren

Dr. Irving Mintzer,
Senior Research Fellow, Center for Global Change, University of Maryland

Dr. Wendell Mohling
President, National Science Teacher's Association

Ms. Katy Moran
Office for External Affairs, The Smithsonian Institution

The Very Reverend James Parks Morton
Dean, Cathedral of St. John the Divine

The Reverend Dr. Edwin G. Mulder
General Secretary, Reformed Church in America

Dr. James Nash
Executive Director, Churches' Center for Theology and Public Policy

Dr. C. William Nichols
General Minister and President, Christian Church (Disciples of Christ)

Dr. Richard S. Nicholson
Executive Officer, American Association for the Advancement of Science

Dr. Richard B. Norgaard
Professor of Energy and Resources, University of California at Berkeley

Dr. Kusumita P. Pedersen
Joint Secretary, Global Forum of Spiritual and Parliamentary Leaders for Human Survival

Dr. Albert M. Pennybacker
Professor of Homiletics, Lexington Theological Seminary

The Reverend Dr. William R. Phillippe
Executive Director, General Assembly Council
Presbyterian Church USA

Reverend Tyrone S. Pitts
Secretary General, Progressive National Baptist Convention Inc.

The Right Reverend Nathaniel Popp
Bishop of Detroit, Orthodox Church in America

Dr. Charles C. Price
Board Chairman, Chemical Heritage Foundation
Benjamin Franklin Professor of Chemistry Emeritus

Dr. H. Ronald Pulliam
Director of the Institute of Ecology, University of Georgia
President, Ecological Society of America

Ms. Paz Artaza-Regan
Program Associate, Ministry of God's Creation
Board of Church and Society, United Methodist Church

Dr. W. Franklyn Richardson
General Secretary, National Baptist Convention

Dr. Howard Ris
Executive Director, Union of Concerned Scientists

Most Reverend John R. Roach
Chair, International Policy Committee
United States Catholic Conference
Archbishop of St. Paul/Minneapolis

Mrs. Barbara Bellows Rockefeller
Professor of History, Middlebury College

Mr. Steven C. Rockefeller
Professor of Religion, Middlebury College

Dr. F. Sherwood Rowland
Donald Bren Professor of Chemistry, University of California at Irvine
President, American Association for the Advancement of Science

Dr. Robert John Russell
Founder and Director, Center for Theology and Natural Sciences

Dr. John Ruskay
Vice Chancellor for Public Affairs, Jewish Theological Seminary of America

Dr. Carl Sagan
Professor of Astronomy and Director of the Laboratory for Planetary Studies, Cornell
University & Co-Chair of the Joint Appeal by Religion and Science for the Environment

Rabbi David Saperstein
Director and Counsel, Religious Action Center of Reform Judaism

Rabbi Alexander Schindler
President, Union of American Hebrew Congregations

Dr. William Schlesinger
Department of Botany, Duke University

Dr. Stephen H. Schneider
Head of the Interdisciplinary Climate Systems Section
National Center for Atmospheric Research

Dr. Ismar Schorsch
Chancellor, Jewish Theological Seminary of America [Tues. only]

Mr. Leonard Schwartz
Chairman, Rainforest Alliance

Dr. Stephen E. Schwartz
Senior Physical Chemist, Brookhaven National Laboratory

Dr. Cecil E. Sherman
Coordinator, Cooperative Baptist Fellowship

Dr. Ronald Sider
Professor of Theology and Society, Eastern Baptist Theological Seminary
Executive Director, Evangelicals for Social Action

Mr. Art Simon
Christian Children's Fund

Dr. N. Jean Sindab
Program Officer for Economic and Environmental Justice
National Council of Churches of Christ

Dr. Bennett W. Smith
First Vice President, Progressive National Baptist Convention

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Division of Environment and Natural Resources
International Development Research Centre

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Associate in Environmental Ethics, Harvard Divinity School

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Director, Office of Domestic Social Development, United States Catholic Conference

Dr. Steven J. Zeitlin

Center for Psychology and Social Change, Harvard Medical School

---Affiliations for identification purposes only---

May 12, 1992

THE JOINT APPEAL BY RELIGION & SCIENCE FOR THE ENVIRONMENT

invited testimony of

Mark Sagoff

Institute for Philosophy and Public Policy

University of Maryland

College Park, Maryland

presented at

Washington, DC

Dirkson Building Rm. 106

I am honored to be here today. Thank you for inviting me.

Before the American Revolution, Hector St. Jean de Crevecoeur asked, "What then is the American, this new man?" and gave an answer we might give today.¹ We are Americans, he wrote, insofar as we take our customs and culture from this new land or, as Robert Frost said at the inauguration of President Kennedy, we are Americans insofar as we belong to -- we are possessed by -- the land we possess.² Our community is bounded not by race, ancestry, or religion but by the history, natural and cultural, of the land we inhabit. We become Americans by becoming native to this place.

In 1864, Vermont naturalist George Marsh Perkins in his classic study Man and Nature cast Nature as the "earthly home" of human beings, thereby including all humanity in a global community.³ Marsh understood that if there is any response to scarcity, it has to be found in technology. He saw that "the multiplying population and impoverished resources of the globe demand new triumphs of mind over matter"⁴ Yet, while technology may liberate us from nature, it should not separate us from nature. Nature must remain the norm. "We shall conceive of the earth, which is the common habitation, as inviolable. One does not act rightly towards one's fellows if one does not know how to act rightly toward the earth."⁵

What is it, then, to "act rightly toward the earth"?
The answer depends most of all on what we mean by the

"earth." We might mean Nature, for example, or we might mean the environment. If we mean Nature or Creation, then we may think of the earth as the world existing apart from us -- the world insofar as it is not affected by human activity.⁶ Treating the earth rightly may then involve treating it with reverence and thus not violating its beauty or integrity. We may value Nature, then, not simply because of the good it does us but because it is good in itself.

On the other hand, we may think of the earth as our environment, in other words, as our life-support system and as the material basis for economic activity. In that context, to act rightly toward the earth is to allocate resources prudently and efficiently. The point of environmental policy would not be to protect nature for its own sake but to maximize the long-run benefits nature offers mankind.

Some things are "more to be admired and enjoyed than used,"⁷ Thoreau said in 1837 to the graduating class at Harvard, thereby foreshadowing the great debate in environmental ethics between preservationists like John Muir, who wished to protect large tracts of the natural world in an unspoiled condition, from conservationists like Gifford Pinchot, who held that "the first duty of the human race is to control the earth it lives upon."⁸ Many of the concepts, metaphors, and norms familiar in environmental controversies derive from a century-long debate between preservationists, who would protect nature for its own sake, and conservationists who would manage resources for human use.⁹

Has there been progress in the debate between preservationists and instrumentalists over the past hundred years? As we look back upon the last century of controversy, we may be impressed less with what divides preservationism and conservationism than with what these two general positions held in common. Both preservationists and conservationists drew a metaphysical and moral distinction between nature and humanity; each wrote an equation with the variables on one side to be solved in terms of constants on the other. Preservationists believed that all the moral constants lie with nature; instrumentalists find their data in human wants; so they would solve the policy equation differently. Whether you agree with instrumentalists or with preservationists, however, you saw nature on one side of the balance and human wants on the other, and the underlying metaphor remained that of nature versus mankind.¹⁰

Both preservationism and instrumentalism have changed, however, to meet changing circumstances, which have brought them more closely into agreement. Preservationists have had to contend with the fact that little if any pristine nature remains to be preserved. Preservationists have to answer questions concerning how to manage nature, i.e., questions about the appropriate role or influence of mankind in the natural environments, rather than questions about how to minimize that role in order to keep nature in a supposed "untouched" state.¹¹

Instrumentalists, in turn, find that concepts drawn from microeconomics concerning the efficiency of particular projects do not help to answer macroeconomic questions about the "carrying capacity" of environmental systems as a whole and ethical questions about the sustainability and, indeed, desirability, of growth aimed primarily at maximizing consumption. Efforts to allocate resources efficiently, however helpful, fail to speak to the urgent need to adjust the aggregate scale of the economy (the sheer amount of throughput of low entropy resources taken from nature and high entropy wastes put back in) to the ecological systems on which it depends. Thus, instrumentalists must answer questions not just about the efficiency of projects but, like preservationists, also about the appropriate role and scale of human activity in the natural world.

I should like to leave you with a concept that mediates between the ideas of nature and of the environment and captures much of what may be most important in each. This is the concept of place. Commentators tell us that Americans lack a sense of or affection for places: we do not settle anywhere, but move on, always going to somewhere or something new.¹² The mobile home, the chain store, the fast-food stand, and the commercial strip turn placelessness into a way of life.¹³ "In this country, at this moment," writes artist Alan Gussow, "we are very conscious of man as a violator of his environment, a destroyer of the earth's lovely places."¹⁴

Much of what we deplore about the human subversion of Nature -- and fear about the destruction of the environment -- has to do with the loss of places we keep in shared memory and cherish with instinctive and collective loyalty. It has to do with a loss of diversity and an attendant loss of security -- the security one has when one relies upon the characteristic aspects of places and communities one knows well. What may worry us most is the prospect of becoming strangers in our own land, of never quite settling into it, of being no more at home here than anywhere. The prospect that a person of European, African, or Asian descent, no matter for how many generations in this country, can never be native to it -- never become a "native American" -- must be an unsettling one. It commits us forever to the vagrancy of the frontier, to a footloose and pioneering spirit that strikes a claim and then moves on.

"The maintenance of a livable global environment," William Ruckelshaus wrote in a recent essay, "depends on the sustainable development of the entire human family." It requires that we see the planet as a communal place to share -- not as a grab-bag of resources to divide. He noted in this respect that poverty has direct environmental consequences: "if the poor nations attempt to improve their lot by the methods we rich have pioneered, the result will eventually be world ecological damage."¹⁵

The emerging field of environmental macroeconomics recognizes issues of poverty, intergenerational equity, and

third-world development as essential elements of the basic theory. Economists in the 1990s understand that the way income is distributed has everything to do with the way resources are allocated, which is to say, the way they are used; for example, the distribution of income may determine whether a society must deplete resources to satisfy immediate needs or whether it may manage them in sustainable ways. Current macroeconomic theory therefore helps the policy agenda by replace the obsolete efficiency goal with other criteria, such as quality of life, provision of basic needs, and limits on throughput, for societal success.

While other species rely on instinct to develop nature into their habitat, human beings have to depend on culture. The traditional work of culture, indeed, has been to make nature into our habitat or home. It is to create a sense of place about the earth -- as the pictures of the planet taken from space helped to do. The word "culture" derives from colere -- to cultivate, to dwell, to care for, and to preserve -- and relates primarily, as Hannah Arendt notes:

to the intercourse of man with nature in the sense of cultivating and tending nature until it becomes fit for habitation. As such, it indicates an attitude of loving care and stands in sharp contrast to all efforts to subject nature to the domination of man.¹⁶

The appropriate cultivation of nature as habitat -- which is neither to preserve nature for its own sake or to industrialize it for the sake of maximizing wealth -- may be America's next great moral achievement. The attitude of loving care for nature, far more than that of efficient

exploitation, expresses and preserves the essential aspect of American culture and, therefore, of our character and identity as a nation. This attitude, as Robert Frost wrote in the poem with which this essay began, has as much to do with giving as with getting and spending. The land was not given to us, Frost wrote, but we to the land:

Such as we were, we gave ourselves outright
(The deed of gift was many deeds of war)
To the land vaguely realizing westward,
But still unstoried, artless, unenhanced,
Such as she was, such as she would become.¹⁷

- 1 "He is an American who, leaving behind him all his ancient prejudices and manners, received new ones from the new mode of life he has embraced." Hector St. Jean de Crevecoeur (Michel-Guillaume-Jean de Crevecoeur), Letters from an American Farmer (Gloucester, MA: Peter Smith, 1968), p. 49.
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9 The humanities may influence environmental policy in part by examining and helping to change the terms of discourse. As Gramsci put this idea: "to change, correct or perfect the concepts of the world that exist in [our] particular age and thus to change the norms of conduct that go along with them; in other words, to change practical society as a whole." Antonio Gramsci, Selections from the Prison Notebooks, Quinton Hoare and Geoffrey Nowell Smith eds. and trans. (London: Lawrence and Wishart, 1971), p. 344.

10 If the environmental struggles of the 1990s were continuous with those of the 1890s, if the central problem today were whether to emphasize intrinsic or instrumental values, whether to adopt a "gospel of preservation" or a "gospel of efficiency," we might have little to add to what artists, writers, philosophers, historians, and others have said on this question. There are good reasons to think, however, that the environmental struggles of the 1990s will not resemble those of the 1890s and to hope that those who contribute to the arts and humanities will not only help society to strike a compromise between preservation and management but, more important, to find other terms in which to cast the debate. The concepts, metaphors, images, and associated norms and attitudes that characterize the traditions of Muir and Pinchot may not be useful in our present circumstances.

Advocates of preservation may reply with great plausibility that the attitudes and interests that lead us to preserve trees for its own sake are better or "nobler" in some sense than those that lead us to tear them down and plant split levels and condominiums in their place. Nevertheless, when we act on these nobler interests and attitudes, a forest remains an object of our will, just as surely as if we had converted it to paper and chewing gum. The preservation of nature for its own sake represents a high aspiration -- but one of many human aspirations nonetheless. Thus, advocates of the efficient use of natural resources may plausibly describe calls for preservation as the pleadings of special interest groups and factor these preferences into the general social calculus on which they believe environmental policy should be based.

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HBC will leave
if we do not let
them set-up now

NER

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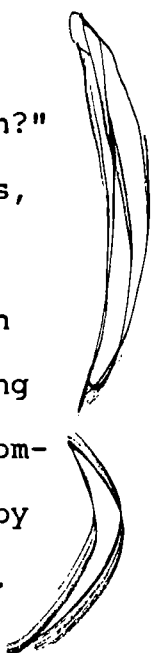
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Office of Environmental Policy

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Kathleen McGinty

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