Climate Change and Energy Activities of U.S. Member Organizations

Morgan S. Harries
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INTRODUCTION

The International Union for Conservation of Nature (IUCN) is an international non-profit organization dedicated to natural resource conservation. Founded in 1948 as the world’s first global environmental organization, today the IUCN is the largest professional global conservation network and a leading authority on the environment and sustainable development. The IUCN has a unique membership association of more than 1,100 member organizations in 140 countries including 200+ government and 800+ non-government organizations, and almost 11,000 volunteers and experts grouped in six Commissions. IUCN’s work is supported by over 1,000 professional staff in 60 offices and hundreds of partners in public, NGO and private sectors around the world. The Union’s headquarters are located in Gland, near Geneva, in Switzerland. The IUCN serves as a neutral forum for governments, NGOs, scientists, business and local communities to find pragmatic solutions to conservation and development challenges and coordinates thousands of field projects and activities around the world. The IUCN has official observer status at the United Nations General Assembly. IUCN’s vision is a just world that values and conserves nature. IUCN’s mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

This report, Climate Change and Energy Activities of U.S. Member Organizations, is an overview of the most current climate change adaptation and mitigation activities of the Union’s eighty U.S. member organizations. This report contains the most current information of organizations activities as of August 2008. Information included in this report was obtained between June and August 2008 from organization websites and other related electronic resources. Information from original program pages may be paraphrased or shortened according to relevance with this report’s focus. Unless otherwise noted, member organization descriptions obtained from IUCN Members Database. (http://www.iucn.org/about/union/members/network/members_database/index.cfm)

Morgan Harries
Research Fellow
IUCN, USA Multilateral Office
August 2008
# TABLE OF CONTENTS

AKRON ZOOLOGICAL PARK .............................................................................................................. 12
  (1) GREEN ZOO ............................................................................................................................... 12

AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS ................................. 12

AMERICAN SOCIETY OF MAMMALOGISTS ............................................................................... 12
  (1) ASM 2008 ANNUAL REPORT – SUMMARY ........................................................................ 12

AMERICAN SOCIETY OF PRIMATOLOGISTS ............................................................................ 12
  (1) INTERNATIONAL PRIMATOLOGICAL SOCIETY XXII CONGRESS EDINBURG 3-8 AUGUST 2008 ....................................................................................................................... 12

ASSOCIATION OF ZOOS AND AQUARIUMS .............................................................................. 13
  (1) CLIMATE CHANGE MESSAGING WORKSHOP – 2007 AZA ANNUAL CONFERENCE .. 13
      • Woodland Park Zoo, Seattle Aquarium ........................................................................ 13
      • AZA Modeling Green Practices .................................................................................. 13
  (2) AZA FUNDING SOURCES .................................................................................................... 13
      • The Bullitt Foundation Grants ....................................................................................... 13

ATLANTIC CENTRE FOR THE ENVIRONMENT ......................................................................... 13
  (1) BIODIVERSITY CONSERVATION PROGRAM ..................................................................... 14

CALIFORNIA INSTITUTE OF PUBLIC AFFAIRS .......................................................................... 14
  (1) INTERENVIRONMENT ............................................................................................................ 14
  (2) CLIMATE CHANGE ............................................................................................................... 14
  (3) INTERCLIMATE .................................................................................................................... 15
  (4) WORKSHOP AT THE 4TH WORLD CONSERVATION CONGRESS IN BARCELONA .......... 15

CENTER FOR BIODIVERSITY AND CONSERVATION, AMERICAN MUSEUM OF NATURAL HISTORY (NY) .............................................................................................................. 15
  (1) BIODIVERSITY AND YOUR ENERGY USE ......................................................................... 16
  (2) BIODIVERSITY IN CRISIS? ................................................................................................... 16

CENTER FOR ENVIRONMENTAL LEGAL STUDIES .................................................................. 16
  (1) PACE ENERGY AND CLIMATE CENTER .......................................................................... 16
  (2) ENERGY EFFICIENCY INITIATIVES .................................................................................... 16
  (3) RENEWABLE ENERGY INITIATIVES .................................................................................. 17
  (4) HIDDEN COST OF POWER PROGRAM .............................................................................. 17
  (5) INTERNATIONAL SUSTAINABILITY PROGRAM .................................................................. 17

CENTER FOR HUMANS AND NATURE, NFP ............................................................................... 18
  (1) PUBLIC HEALTH AND ENVIRONMENTAL EMERGENCY PREPAREDNESS AND ADAPTATION PLANNING ................................................................................................. 18
  (2) ADAPTATION TO CLIMATE CHANGE: EXPANDING OUR MORAL AND CIVIC IMAGINATIONS TO THE SCOPE AND URGENCY OF THE CHALLENGE ........................................ 19

CENTER FOR INTERNATIONAL ENVIRONMENTAL LAW ......................................................... 19
  (1) CLIMATE CHANGE PROGRAM ......................................................................................... 19
  (2) CLIMATE IMPACT CASE STUDIES .................................................................................... 19

CENTER FOR PLANT CONSERVATION ......................................................................................... 19

CHEYENNE MOUNTAIN ZOOLOGICAL PARK ............................................................................ 20

CHICAGO ZOOLOGICAL SOCIETY .............................................................................................. 20

CLEVELAND METROPARKS ZOO ................................................................................................. 20
| ENVIRONMENTAL DEFENSE FUND | ............................................................... | 20 |
| (1) EDF'S APPROACH TO GLOBAL WARMING | ............................................................... | 20 |
| • National Policy | ............................................................... | 21 |
| • State and Regional Policy | ............................................................... | 21 |
| • Corporate Partnerships | ............................................................... | 21 |
| • Farm Innovation | ............................................................... | 21 |
| • International Leadership | ............................................................... | 22 |
| • Legal Action | ............................................................... | 22 |
| • Public Outreach | ............................................................... | 22 |
| (2) RESOURCES FOR COMPANIES | ............................................................... | 22 |
| • Paper Calculator | ............................................................... | 22 |
| • Innovations Review | ............................................................... | 22 |
| • Hybrid Truck Incentive Guide | ............................................................... | 22 |
| • The 4 Cs of Climate Action | ............................................................... | 23 |
| • Nano Risk Framework | ............................................................... | 23 |
| • Paper Task Force Report | ............................................................... | 23 |
| • MERGE | ............................................................... | 23 |
| • Cleaner Diesel Handbook | ............................................................... | 23 |
| ENVIRONMENTAL LAW INSTITUTE | ............................................................... | 23 |
| (1) CLIMATE CHANGE PROGRAM | ............................................................... | 23 |
| (2) CLIMATE CHANGE ACTIVITIES REPORT | ............................................................... | 24 |
| FORESTA INSTITUTE FOR OCEAN AND MOUNTAIN STUDIES | ............................................................... | 25 |
| FOUNDATION FOR ENVIRONMENTAL SECURITY AND SUSTAINABILITY | ............................................................... | 25 |
| (1) ENERGY SECURITY | ............................................................... | 25 |
| (2) SUSTAINABILITY BIOENERGY IN AFRICA: ISSUES AND POSSIBILITIES | ............................................................... | 26 |
| GEORGE WRIGHT SOCIETY | ............................................................... | 26 |
| (1) WHAT SHOULD PROTECTED AREAS MANAGERS DO IN THE FACE OF CLIMATE CHANGE? | ............................................................... | 26 |
| GLOBAL LAND COVER FACILITY, UNIVERSITY OF MARYLAND | ............................................................... | 26 |
| (1) RESEARCH | ............................................................... | 26 |
| (2) DEFORESTATION MAPPING GROUP (DMG) | ............................................................... | 27 |
| (3) GLOBAL LAND COVER CHANGE | ............................................................... | 27 |
| (4) AMAZON AND CENTRAL AFRICA FOREST CHANGE PRODUCTS | ............................................................... | 27 |
| KHALED BIN SULTAN LIVING OCEANS FOUNDATION | ............................................................... | 27 |
| (1) PATTERNS OF BIODIVERSITY AND CLIMATE CHANGE IMPACTS IN THE BAHAMAS | ............................................................... | 27 |
| (2) 11TH INTERNATIONAL CORAL REEF SYMPOSIUM (ICRS) | ............................................................... | 28 |
| LOS ANGELES ZOO | ............................................................... | 28 |
| (1) GREEN LA | ............................................................... | 28 |
| MARINE CONSERVATION BIOLOGY INSTITUTE | ............................................................... | 28 |
| NATIONAL AUDUBON SOCIETY | ............................................................... | 29 |
| (1) GLOBAL WARMING | ............................................................... | 29 |
| (2) AUDUBON'S POSITION ON WIND POWER | ............................................................... | 29 |
| NATIONAL PARKS CONSERVATION ASSOCIATION | ............................................................... | 30 |
| (1) UNNATURAL DISASTER: GLOBAL WARMING AND OUR NATIONAL PARKS | ............................................................... | 30 |
| NATIONAL WILDLIFE FEDERATION | ............................................................... | 30 |
| (1) GLOBAL WARMING | ............................................................... | 31 |
(2) INVESTING IN AMERICA'S NATURAL RESOURCES .......................................................... 31
(3) CLIMATE ACTION CENTER ......................................................................................... 31
(4) CAMPUS ECOLOGY PROGRAM.................................................................................. 31
(5) CHILL OUT: CAMPUS SOLUTIONS TO GLOBAL WARMING ..................................... 31
(6) NWF ON FACEBOOK .................................................................................................. 31

NATURAL HERITAGE INSTITUTE ...................................................................................... 32
(1) CLIMATE CHANGE ...................................................................................................... 32
(2) CLIMATE CHANGE ADAPTATION .............................................................................. 32
(3) DEVELOPING ADAPTIVE STRATEGIES FOR TIDAL MARSHES .................................. 32
(4) PUBLICATIONS ON CLIMATE CHANGE ADAPTATION ........................................... 33

NATURAL RESOURCES DEFENSE COUNCIL ................................................................. 33
(1) GLOBAL WARMING ISSUES ....................................................................................... 33
(2) SOLVING GLOBAL WARMING .................................................................................. 33
(3) BEAT THE HEAT ......................................................................................................... 33
(4) NRDC'S POLICY RECOMMENDATIONS FOR REDUCING U.S. EMISSIONS ............... 33
(5) SIX ENERGY SECTOR OPPORTUNITIES FOR SOLVING GLOBAL WARMING .......... 34
(6) IN HOT WATER: WATER MANAGEMENT STRATEGIES TO WEATHER THE EFFECTS OF GLOBAL WARMING ................................................................. 35
(7) CLIMATE CHANGE IMPACT REPORTS .................................................................... 35

PRIMARILY PRIMATES ........................................................................................................... 36

REEF CHECK FOUNDATION ............................................................................................. 36
(1) THE GLOBAL CORAL REEF CRISIS ........................................................................ 36

SMITHSONIAN INSTITUTION .............................................................................................. 37
(1) ARCTIC ODYSSEY: GLOBAL WARMING SYMPOSIUM ............................................ 37
(2) CLIMATE CHANGE AND BIODIVERSITY IN THE AMERICAS SYMPOSIUM ........ 37
(3) THE EFFECT OF CLIMATE CHANGE ON MIGRATORY BIRDS ................................ 37

SNOW LEOPARD TRUST ..................................................................................................... 38

ST. LOUIS ZOOLOGICAL PARK .......................................................................................... 38
(1) SCIENCE SEMINARS ................................................................................................... 38

THE HEINZ CENTER .......................................................................................................... 38
(1) GLOBAL CHANGE PROGRAM .................................................................................... 39
(2) GLOBAL ENERGY ASSESSMENT (GEA) .................................................................... 39
(3) ECOTHEROOLDS INITIATIVE .................................................................................... 39
(4) UNDERSTANDING THE ROLE AND IMPORTANCE OF METHANE TO CLIMATE CHANGE .......................................................... 39
(5) THE GLOBAL CHANGE ADVISORY COMMITTEE ..................................................... 39

THE NATURE CONSERVANCY ............................................................................................ 40
(1) GLOBAL CLIMATE CHANGE INITIATIVE ................................................................ 40
• What the Nature Conservancy is doing ....................................................................... 40
• Reducing Deforestation ............................................................................................... 40
• Helping People and Nature Adapt ............................................................................. 41
• Policies to Reduce Emissions and Impacts ................................................................. 42
(2) VOLUNTARY CARBON OFFSET PROGRAM ................................................................ 43
• The Tensas River Basin Project .................................................................................. 43
(3) FOREST CARBON PARTNERSHIP FACILITY ........................................................ 44

THE OCEAN CONSERVANCY ............................................................................................... 45
(1) POSITION ON GLOBAL CLIMATE CHANGE ......................................................... 45

THE PEW CHARITABLE TRUSTS .......................................................................................... 45
<table>
<thead>
<tr>
<th>No.</th>
<th>Organization and Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CLIMATE CHANGE CAMPAIGNS</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>PEW CAMPAIGN FOR FUEL EFFICIENCY</td>
<td>45</td>
</tr>
<tr>
<td>3</td>
<td>PEW CAMPAIGN ON GLOBAL WARMING</td>
<td>46</td>
</tr>
<tr>
<td>4</td>
<td>CLIMATE CHANGE POLICY AND SCIENCE</td>
<td>46</td>
</tr>
<tr>
<td>5</td>
<td>PEW CENTER ON GLOBAL CLIMATE CHANGE</td>
<td>46</td>
</tr>
<tr>
<td>6</td>
<td>FEDERAL CLIMATE CHANGE POLICY</td>
<td>46</td>
</tr>
<tr>
<td>7</td>
<td>STATE CLIMATE CHANGE POLICY</td>
<td>46</td>
</tr>
<tr>
<td>8</td>
<td>BIOFUELS FOR TRANSPORTATION: A CLIMATE PERSPECTIVE</td>
<td>47</td>
</tr>
<tr>
<td>9</td>
<td>U.S. CLIMATE ACTION PARTNERSHIP (USCAP)</td>
<td>47</td>
</tr>
<tr>
<td>10</td>
<td>PEW CENTER'S COAL INITIATIVE</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>THE WILD FOUNDATION</td>
<td>48</td>
</tr>
<tr>
<td>1</td>
<td>WILDERNESS AND CLIMATE CHANGE</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>WILD 9, THE 9TH WORLD WILDERNESS CONGRESS</td>
<td>48</td>
</tr>
<tr>
<td>3</td>
<td>THE EXTREME ICE SURVEY</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>CLIMATE ACTION PARTNERSHIP – A SOUTH AFRICAN NGO PARTNERSHIP</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>THE WILDLIFE CONSERVATION SOCIETY</td>
<td>48</td>
</tr>
<tr>
<td>1</td>
<td>CLIMATE CHANGE</td>
<td>49</td>
</tr>
<tr>
<td>2</td>
<td>REDUCING AND OFFSETTING CARBON EMISSIONS</td>
<td>49</td>
</tr>
<tr>
<td>3</td>
<td>CLIMATE CHANGE INITIATIVE</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>THE WILDLIFE SOCIETY</td>
<td>51</td>
</tr>
<tr>
<td>1</td>
<td>2007 POLICY PRIORITIES</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>GLOBAL CLIMATE CHANGE AND WILDLIFE</td>
<td>51</td>
</tr>
<tr>
<td>3</td>
<td>ENERGY DEVELOPMENT ON FEDERAL LANDS</td>
<td>51</td>
</tr>
<tr>
<td>4</td>
<td>TECHNICAL REVIEW ON WIND ENERGY IMPACTS ON WILDLIFE</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>TIBET JUSTICE CENTER</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>TROPICAL RESOURCES INSTITUTE (YALE SCHOOL OF FORESTRY AND ENVIROMENTAL STUDIES)</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>UNITED NATIONS FOUNDATION</td>
<td>52</td>
</tr>
<tr>
<td>1</td>
<td>CLIMATE AND ENERGY INITIATIVE</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>INTERNATIONAL BIOENERGY INITIATIVE</td>
<td>53</td>
</tr>
<tr>
<td>3</td>
<td>UN BIOFUELS INITIATIVE</td>
<td>53</td>
</tr>
<tr>
<td>4</td>
<td>THE BIOFUELS FAQ</td>
<td>54</td>
</tr>
<tr>
<td>5</td>
<td>REALIZING THE POTENTIAL OF ENERGY EFFICIENCY</td>
<td>54</td>
</tr>
<tr>
<td>6</td>
<td>GLOBAL LEADERSHIP FOR CLIMATE ACTION (GLCA)</td>
<td>54</td>
</tr>
<tr>
<td>7</td>
<td>SCIENTIFIC EXPERT GROUP ON CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT (SEG)</td>
<td>54</td>
</tr>
<tr>
<td>8</td>
<td>25x25 INITIATIVE</td>
<td>55</td>
</tr>
<tr>
<td>9</td>
<td>INVESTOR NETWORK ON CLIMATE RISK (INCR)</td>
<td>55</td>
</tr>
<tr>
<td>10</td>
<td>BUILDING A CLEAN ENERGY FUTURE – THE ROLE OF STUDENTS AND UNIVERSITY ENDOWMENTS</td>
<td>56</td>
</tr>
<tr>
<td>11</td>
<td>UN FOUNDATION PROGRAMS</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>WILDLIFE ALLIANCE</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>WILDLIFE MANAGEMENT INSTITUTE</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>WORLD RESOURCES INSTITUTE</td>
<td>57</td>
</tr>
<tr>
<td>1</td>
<td>CLIMATE, ENERGY &amp; TRANSPORT</td>
<td>57</td>
</tr>
<tr>
<td>2</td>
<td>INTERNATIONAL ACTION</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>• Sustainable Development Policies and Measures (SDPAMs)</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>• GHG Protocol Initiative</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>• EMBARQ: The WRI Center for Sustainable Transport</td>
<td>58</td>
</tr>
</tbody>
</table>
• Vulnerability and Adaptation Project ................................................................. 59
(3) U.S. ACTION ........................................................................................................ 59
• Emissions Markets Project .................................................................................... 59
• US Climate Business Group .................................................................................. 59
• Green Power Market Development Group (GPMDG) .......................................... 60
• Carbon Capture and Sequestration (CCS) ............................................................. 60
(4) SUSTAINABLE BUSINESS AND MARKETS ..................................................... 60
• Capital Markets Research ....................................................................................... 60
(5) CLIMATE ANALYSIS INDICATORS TOOL (CAIT) ............................................ 61
(6) The Climate Registry ............................................................................................ 61
WORLD WILDLIFE FUND – US .............................................................................. 61
(1) WWF CLIMATE PROGRAM .............................................................................. 61
(2) REDD ................................................................................................................... 62
(3) WWF CLIMATE CHANGE ADAPTATION/RESILIENCE BUILDING PROJECTS ... 62
(4) CLIMATE SAVERS .............................................................................................. 62
(5) BUYING TIME: A USER’S MANUAL TO BUILDING RESISTANCE AND RESILIENCE TO CLIMATE CHANGE IN NATURAL SYSTEMS ................................................................. 63
(6) CLIMATE CAMP ................................................................................................ 63
WORLDWATCH INSTITUTE ....................................................................................... 63
(1) ENERGY AND CLIMATE CHANGE PROGRAM ............................................... 63
(2) SUSTAINABLE AGRICULTURE PROGRAM ..................................................... 64
ZOOLOGICAL SOCIETY OF SAN DIEGO ................................................................. 64
(1) CLIMATE CHANGE: ENDANGERED WILDLIFE AND HABITATS ................... 64
ANTARCTIC AND SOUTHERN OCEAN COALITION .............................................. 66
(1) ISSUES: THE ANTARCTIC AND CLIMATE CHANGE ...................................... 66
CONSERVATION INTERNATIONAL ....................................................................... 66
(1) CLIMATE CHANGE STRATEGY ......................................................................... 66
(2) CI CARBON PROJECTS: SAVING FORESTS ..................................................... 67
(3) CI CARBON PROJECTS: PROTECTING OCEANS ............................................. 68
(4) FUTURE CI FOREST CARBON PROJECTS ....................................................... 68
COUNTERPART INTERNATIONAL, INC ................................................................. 70
(1) GLOBAL SUSTAINABLE ENERGY ISLANDS INITIATIVE (GSEII) ..................... 70
ECOAGRICULTURE PARTNERS ............................................................................ 70
(1) 3RD INTERNATIONAL CONFERENCE ON GLOBAL WARMING AND CLIMATE CHANGE (GWCC 08) ........................................................................................................ 71
(2) FOOD, FUEL, AND FORESTS: A SEMINAR ON CLIMATE CHANGE, AGRICULTURE, AND TRADE, BOGOR, INDONESIA, 12 MAY 2008 ...................................................... 71
FOREST TRENDS .................................................................................................. 71
(1) BUSINESS AND BIODIVERSITY OFFSET PROGRAM (BBOP) ......................... 71
(2) FOREST CLIMATE ALLIANCE .......................................................................... 71
INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES ............ 72
(1) CHANGING CLIMATE OF WILDLIFE MANAGEMENT .................................... 72
INTERNATIONAL INDIAN TREATY COUNCIL ..................................................... 72
(1) IITC PROGRAM PRIORITIES .............................................................................. 73
(2) STATEMENT REGARDING WATER, CLIMATE CHANGE/GLOBAL WARMING AND THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS (POPS) .............................................................................................................. 73
(3) DECLARATION OF THE FIRST INTERNATIONAL FORUM OF INDIGENOUS PEOPLES ON CLIMATE CHANGE ................................................................. 73
<table>
<thead>
<tr>
<th>Organization</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNATIONAL PRIMATE PROTECTION LEAGUE</td>
<td>73</td>
</tr>
<tr>
<td>INTERNATIONAL SPECIES INFORMATION SYSTEM</td>
<td>73</td>
</tr>
<tr>
<td>NATIONAL GEOGRAPHIC SOCIETY</td>
<td>73</td>
</tr>
<tr>
<td>(1) Global Warming Awareness</td>
<td>74</td>
</tr>
<tr>
<td>(2) Alternative Energy Awareness</td>
<td>74</td>
</tr>
<tr>
<td>(3) Climate Connections</td>
<td>74</td>
</tr>
<tr>
<td>(4) The Green Guide</td>
<td>75</td>
</tr>
<tr>
<td>(5) National Geographic Magazine June 2007 Issue: The Big Thaw</td>
<td>75</td>
</tr>
<tr>
<td>(6) National Geographic Global Warming TV Show</td>
<td>75</td>
</tr>
<tr>
<td>(7) National Geographic Addressed Climate Change at the IDB</td>
<td>76</td>
</tr>
<tr>
<td>NATURESERVE</td>
<td>76</td>
</tr>
<tr>
<td>PACIFIC SEABIRD GROUP</td>
<td>76</td>
</tr>
<tr>
<td>(1) 36th Annual Meeting of the Pacific Seabird Group</td>
<td>76</td>
</tr>
<tr>
<td>RAINFOREST ALLIANCE</td>
<td>76</td>
</tr>
<tr>
<td>(1) Carbon Services</td>
<td>77</td>
</tr>
<tr>
<td>(2) Helping Communities to Gain Access to the Carbon Credit Market</td>
<td>77</td>
</tr>
<tr>
<td>(3) Verifying Conservation Carbon Credits</td>
<td>77</td>
</tr>
<tr>
<td>(4) Carbon Services Connections for Companies</td>
<td>77</td>
</tr>
<tr>
<td>RARE</td>
<td>77</td>
</tr>
<tr>
<td>SIERRA CLUB</td>
<td>78</td>
</tr>
<tr>
<td>(1) Smart Energy Solutions to Global Warming</td>
<td>78</td>
</tr>
<tr>
<td>• Global Warming Policy Solutions</td>
<td>78</td>
</tr>
<tr>
<td>• Clean Car Campaign</td>
<td>78</td>
</tr>
<tr>
<td>• The Biggest Single Step</td>
<td>79</td>
</tr>
<tr>
<td>(2) Trade and Climate Change</td>
<td>79</td>
</tr>
<tr>
<td>(3) Cool Cities</td>
<td>79</td>
</tr>
<tr>
<td>(4) Sierra Club’s Action Center on Facebook</td>
<td>79</td>
</tr>
<tr>
<td>SOCIETAS INTERNATIONALIS LIMNOLOGIAE THEORETICAET APPLICATAE</td>
<td>80</td>
</tr>
<tr>
<td>SOCIETY FOR CONSERVATION BIOLOGY</td>
<td>80</td>
</tr>
<tr>
<td>(1) Policy Priorities – Climate Change</td>
<td>80</td>
</tr>
<tr>
<td>(2) Research Papers</td>
<td>80</td>
</tr>
<tr>
<td>SOCIETY FOR ECOLOGICAL RESTORATION INTERNATIONAL</td>
<td>80</td>
</tr>
<tr>
<td>WILD SALMON CENTER</td>
<td>81</td>
</tr>
<tr>
<td>(1) North America Program</td>
<td>81</td>
</tr>
<tr>
<td>WILDLIFE TRUST</td>
<td>81</td>
</tr>
<tr>
<td>(1) Conservation Solutions</td>
<td>81</td>
</tr>
<tr>
<td>WORLD ENVIRONMENT CENTER</td>
<td>81</td>
</tr>
<tr>
<td>(1) Capacity Building: Advancing Sustainable Solutions</td>
<td>81</td>
</tr>
<tr>
<td>• Greening the Supply Chain</td>
<td>81</td>
</tr>
<tr>
<td>• WEC Alliance for Private Sector Competitiveness in El Salvador</td>
<td>82</td>
</tr>
<tr>
<td>(2) Roundtable on “Corporate Strategies in Response to Climate Change”</td>
<td>82</td>
</tr>
<tr>
<td>(3) Roundtable on “The Future of Our Energy Choices”</td>
<td>83</td>
</tr>
<tr>
<td>WOODLAND PARK ZOOCOLOGICAL SOCIETY</td>
<td>84</td>
</tr>
<tr>
<td>(1) Climate Change Messaging</td>
<td>84</td>
</tr>
<tr>
<td>• Engaging the Public on Global Climate Change</td>
<td>84</td>
</tr>
<tr>
<td>• Zoo Footprint</td>
<td>84</td>
</tr>
</tbody>
</table>
US DEPT OF STATE, BUREAU OF OCEANS AND INTL ENVIRONMENTAL AND
SCIENTIFIC AFFAIRS ........................................................................ 85
(1) U.S. ACTIONS TO ADDRESS: ENERGY SECURITY, CLEAN DEVELOPMENT, AND
CLIMATE CHANGE ........................................................................ 85
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) ........... 89
(1) NOAA’S CLIMATE ACTIVITIES .................................................... 89
(2) CLIMATE PROGRAM OFFICE (CPO) ........................................ 89
(3) OPERATIONAL CLIMATE PROGRAM ....................................... 90
(4) NOAA OFFICE OF GLOBAL PROGRAMS .................................. 90
US AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID) ................... 90
(1) GLOBAL CLIMATE CHANGE PROGRAM ................................... 90
   • Country and Regional Information ........................................... 91
   • Current Program Projects ..................................................... 91
US FOREST SERVICE ........................................................................ 91
(1) RESEARCH & DEVELOPMENT - NATIONAL PROGRAM FOR GLOBAL CHANGE
RESEARCH ..................................................................................... 91
   • National Leadership Roles ...................................................... 92
   • Effects on Ecosystems and People .......................................... 92
   • Other Research Underway .................................................... 93
(2) NORTHERN INSTITUTE OF APPLIED CARBON SCIENCE ............. 93
(3) CLIMATE CHANGE TREE ATLAS ........................................... 94
(4) CLIMATE CHANGE BIRD ATLAS ........................................... 94
(5) CLIMATE CHANGE RESEARCH IN THE US FOREST SERVICE ......... 94
US FISH AND WILDLIFE SERVICE .................................................. 95
(1) CONSERVING THE NATURE OF AMERICA IN A CHANGING CLIMATE .... 95
(2) USFWS REGIONAL FORUMS ................................................... 95
(3) SERVICE PROGRAMS ........................................................... 95
   • National Wildlife Refuge System ......................................... 95
   • Migratory Bird Program ...................................................... 95
   • Endangered Species Program ............................................. 95
   • Fisheries Program ........................................................... 96
   • Habitat Conservation Program ........................................ 96
   • Environmental Quality Program ....................................... 96
US NATIONAL PARK SERVICE .......................................................... 97
(1) CLIMATE FRIENDLY PARKS ................................................... 97
US ENVIRONMENTAL PROTECTION AGENCY (EPA) ............................ 97
(1) CLIMATE CHANGE .............................................................. 97
(2) EPA GREENHOUSE GAS REDUCTION INITIATIVES ....................... 97
   • Clean Energy-Environment State Partnership ....................... 97
   • Climate Leaders ............................................................... 98
   • Combined Heat and Power (CHP) Partnership ...................... 98
   • ENERGY STAR .................................................................. 98
   • EPA Office of Transportation and Air Quality Voluntary Programs ........................................... 98
   • Green Power Partnership .................................................. 99
   • High GWP Gas Voluntary Programs ................................... 99
   • Methane Voluntary Programs ........................................... 99
   • WasteWise ...................................................................... 100
   • EPA’s Clean Energy Programs .......................................... 100
• Landfill Methane Outreach Program (LMOP) .......................................................... 100
(3) Non-CO₂ Mitigation ............................................................................................... 100
• Greenhouse Gas Mitigation Potential in U.S. Forestry and Agriculture .................. 100
(4) Climate Change Science Program ....................................................................... 101
• EPA’s Global Change Research Program ............................................................... 101
(5) Climate Change Technology Program .................................................................. 101
(6) National Water Program Strategy: Response to Climate Change ....................... 101
• Climate Change and the National Water Program – Background Information .... 102

CLIMATE ACTION NETWORK .................................................................................. 104
(1) CAN-International ................................................................................................. 104
(2) CAN’s Three Track Approach ................................................................................ 104
• The Kyoto Track ........................................................................................................ 104
• The "Greening" Track .............................................................................................. 104
• The Adaptation Track ............................................................................................. 105
• Historical Responsibility ......................................................................................... 105
(3) Climate Action Network (USCAN) ...................................................................... 105
• USCAN Mission Statement .................................................................................... 105
• USCAN Objectives .................................................................................................. 106

U.S. CLIMATE CHANGE SCIENCE PROGRAM .................................................. 106
(1) OVERVIEW .............................................................................................................. 106
• CCSP Vision ............................................................................................................. 106
• CCSP Mission .......................................................................................................... 106
• CCSP Goals ............................................................................................................... 106
• Core Approaches ..................................................................................................... 107
• Research Elements .................................................................................................. 107
(2) SYNTHESIS AND ASSESSMENT PRODUCT REPORTS ................................... 107
• Highlighted Report: “Preliminary Review of Adaptation Options for Climate- sensitive Ecosystems and Resources” .......................................................... 107

CLIMATE, COMMUNITY AND BIODIVERSITY ALLIANCE ...................................... 108
1. CCBA MISSION ......................................................................................................... 108
• Goals .......................................................................................................................... 108
2. CCB STANDARDS .................................................................................................... 108
3. PROJECTS ............................................................................................................... 109

FOREST CARBON PARTNERSHIP FACILITY .................................................. 109
(1) OVERVIEW OF THE FOREST CARBON PARTNERSHIP FACILITY ............. 109
• Mechanisms to Support FCPF Objectives ............................................................... 109

SUSTAINABLE FORESTRY INITIATIVE .................................................................. 110
(1) SUSTAINABLE FORESTRY INITIATIVE (SFI) PROGRAM .............................. 110
• SFI Standard .............................................................................................................. 110
• SFI Chain of Custody ............................................................................................... 111
• SFI Label ................................................................................................................... 111
• Pilot Programs .......................................................................................................... 112
(1) CARBON MITIGATION INITIATIVE (CMI) ...................................................... 113
• The Capture Group ................................................................................................... 113
• The Storage Group .................................................................................................. 113
• The Science Group .................................................................................................. 113
• The Integration Group ............................................................................................. 114
“INTERNATIONAL PRIMATOLOGICAL SOCIETY XXII CONGRESS EDINBURG 3-8 AUGUST 2008.” INTERNATIONAL PRIMATOLOGICAL SOCIETY. 
<HTTP://WWW.IPS2008.CO.UK/DOWNLOADS/Sponsorship04-04-08.PDF>. ..................... 115
AKRON ZOOLOGICAL PARK
Founded in 1953, a professional zoo specialising in local public education about the environment and the dignity of animals.
www.akronzoo.org

(1) Green Zoo
Information coming soon on how the Akron Zoo is becoming an environmentally friendly zoo.
http://www.akronzoo.org/about/Green.asp

AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS
The American Society of Ichthyologists and Herpetologists aims to advance the science of the study of fishes, amphibians and reptiles.
www.asih.org

No climate-related activities.

AMERICAN SOCIETY OF MAMMALOGISTS
Established in 1919, the American Society of Mammalogists encourages study and research in all phases of mammalogy.
http://www.mammalogy.org

(1) ASM 2008 Annual Report – Summary
A 180-minute symposium titled Global Adaptation to a Changing Climate included nine participants from four countries and six presentations, including two on mammals. One of the mammal talks was mine on —Microevolution of Chicago-Area Mice , filling in for an absent speaker. The other was —The Grinnell Project by Morgan Tingley. Audio downloads are available at http://www.redrockinstitute.org/symposia.html

AMERICAN SOCIETY OF PRIMATOLOGISTS
The American Society of Primatologists is a nonprofit corporation that promotes and encourages the discovery and exchange of information regarding primates.
www.asp.org

(1) International Primatological Society XXII Congress Edinburg 3-8 August 2008
The symposia and workshops scheduled for the IPS Congress will include “The effects of climate change on primate populations: A review of the mechanisms and theoretical predictions.”
ASSOCIATION OF ZOOS AND AQUARIUMS
Founded in 1924, the Association of Zoos and Aquariums is a non-profit organization dedicated to the advancement of zoological parks and aquariums for conservation, education, scientific studies and recreation.

www.aza.org

(1) Climate Change Messaging Workshop – 2007 AZA Annual Conference
Notes from the Climate Change Messaging Workshop at the 2007 AZA Annual Conference in Philadelphia includes suggestions for exhibits, public programs, and modeling green practices.

• Woodland Park Zoo, Seattle Aquarium
“Engaging the Public on Global Climate Change” in discussion stage with Univ. of Washington and Climate Solutions. Hope for NSF funding to include: interactive exhibits at zoo, aquarium with emphasis on climate solutions; joint programming for K-12 and general public; teacher workshops, seminars.

• AZA Modeling Green Practices
AZA plans to put green master plans on the resources section of website, share approaches on the Green Practices SAG listserv, and make climate change a higher profile issue. Challenges include limited resources and institutional support to implement green actions, lack of green infrastructure within the community, and the lack of support from municipalities.

(2) AZA Funding Sources

• The Bullitt Foundation Grants
Primary Purpose of Grant: To support the protection and restoration of the environment of the Pacific Northwest. Priority areas include energy and climate change; forests and land ecosystems; growth management and transportation; public outreach, education, and capacity building; rivers, wetlands, and estuaries.

ATLANTIC CENTRE FOR THE ENVIRONMENT
The Quebec-Labrador Foundation’s mission is to support the rural communities and environment of eastern Canada and New England and to create models for stewardship of natural resources and cultural heritage that can be applied worldwide. QLF fosters long-term leadership development within individuals and communities by supporting community-based conservation initiatives; developing models of stewardship of natural and cultural resources; and aiding in community service, economic development, and heritage preservation in rural regions. QLF is a not-for-profit organization in the U.S. and a registered charity in Canada.

www.qlf.org
Biodiversity Conservation Program
QLF works with communities to develop and implement projects that conserve biodiversity and sustain local livelihoods. In co-operation with local residents, organizations and governments, projects empower communities to take an active role in managing their natural resources, promote initiatives that provide economic benefit from biological conservation and improve public awareness of the significance of healthy environments through outreach and education. Many of these community-based projects are recognized globally as successful models of long-term conservation. Projects within the Biodiversity Conservation Program include: Marine Species at Risk; Sea Duck and Seabird Conservation; Climate Change; Environment and Health; Leadership; Sustainable Fisheries. 
http://www.qlf.org/atlantic_program/commun_conserv.htm#species

CALIFORNIA INSTITUTE OF PUBLIC AFFAIRS
Founded in 1969, the California Institute of Public Affairs is an independent, nonprofit, nonpartisan public policy institute based in Sacramento, California. CIPA tries to build bridges between the practical and academic worlds and has been affiliated with Claremont Graduate University since 1972. CIPA’s main focus is on natural resources and the environment, both in California and internationally. It provides the secretariat for the IUCN Cities Task Force, as it has for many other IUCN activities, and is a partnership organization in InterClimate.
www.cipahq.org
http://www.interenvironment.org/cipa/

InterEnvironment
InterEnvironment, CIPA's international program, works through a global network of individuals who have extensive experience in international environmental affairs, particularly policy and social aspects of natural resource conservation. It has been a pioneer in explaining and promoting the concept of sustainability, defined as improving the quality of human life while living within the carrying capacity of supporting ecosystems. Applying this concept requires a systematic, long-range view of public affairs that combines political, social, cultural, and economic, as well as ecological concerns. Thus, the "Inter" in InterEnvironment stands for interconnections, as well as international. Most of InterEnvironment's international work is done with IUCN.
http://www.interenvironment.org/index.htm

Climate Change
CIPA has followed climate change issues since the late 1980s, both in California and at the international level. Several CIPA board members and senior associates are involved in policy research and development on climate change and closely related problems.
Climate Change Activities:
• In Brazil, working in partnership with the Brazilian Foundation for Conservation of Nature, CIPA has explored using innovative approaches to carbon sequestration through forest protection and restoration.
In California, CIPA has advised the Public Health Institute on increasing awareness of projected impacts of global climate change on public health in the state.

http://www.interenvironment.org/cipa/climate.htm Climate Change Webpage

InterClimate

InterClimate, a new UK-based international initiative for education and local community involvement in climate change solutions. InterClimate will build alliances with schools and universities aimed at engaging those under 25 years of age, especially 16-19-year-olds, in finding solutions to causes and effects of climate change in their local areas. InterClimate will work mainly through secondary schools. The expectation is that student participants will engage their families and, though them, local and national leaders. Based in the United Kingdom and launched in June 2008 with a major three-year grant from Barclays Bank, InterClimate is led by John Davidson, a senior associate with CIPA. InterClimate's main academic partner organization is the University of Oxford's Environmental Change Institute.

InterClimate's first stage will involve 50 schools each in parts of England and Kenya. The second stage will do the same in the Indian state of Maharashtra (Mumbai and Pune) and the Cape region of South Africa. In the third stage, CIPA will do a feasibility study for including California in the program; this study will involve universities, as well as secondary schools, since in the United States the 16-19 age group bridges both kinds of institutions.

www.InterClimate.org website available by late August 2008

Workshop at the 4th World Conservation Congress in Barcelona

CIPA is organizing a workshop to be held at the 4th IUCN World Conservation Congress (Barcelona, October 2008) on "Climate change as an opportunity for conservationists to build new alliances." This event will be conducted in cooperation with InterClimate, as well as the World Academy of Art and Science and the IUCN Cities Task Force. In addition to contributing to World Conservation Congress debates, this event will be one of several "launches" of InterClimate around the world, this one oriented toward the global nature conservation community.

http://www.interenvironment.org/cipa/wcc4workshop.htm

CENTER FOR BIODIVERSITY AND CONSERVATION,
AMERICAN MUSEUM OF NATURAL HISTORY (NY)
The Center for Biodiversity and Conservation’s mission is to mitigate critical threats to global biological and cultural diversity by: advancing scientific research in diverse ecosystems; strengthening the application of science to conservation practice and public policy; developing professional, institutional, and community capacity; and furthering the Museum's efforts to heighten public understanding and stewardship of biodiversity. The American Museum of Natural History created the interdisciplinary Center for Biodiversity and Conservation in 1993 in response to concern among its scientists over
rapid species loss and increasing habitat degradation around the world. Studying the immense variety of life on the planet and the complex relations among living things—what we now call biodiversity—has been a fundamental activity of the American Museum of Natural History since its founding.

http://cbc.amnh.org/

(1) Biodiversity and Your Energy Use

(2) Biodiversity in Crisis?
An Introduction to the Issues and Comparison of Opinions from Scientists and the Public. The recent poll, "Biodiversity in the Next Millennium," commissioned by the American Museum of Natural History, suggested substantial gaps between scientists' and the public's self-described knowledge of aspects of biological diversity or "biodiversity." Because so many scientists believe in the critical importance of greater public awareness of these issues, this document briefly highlights some of the main survey results and surveys the basis of scientific concerns for biodiversity.
http://cbc.amnh.org/crisis/

CENTER FOR ENVIRONMENTAL LEGAL STUDIES
Founded in 1982, the Center for Environmental Legal Studies undertakes a range of research and scholarly publications, as well as sponsoring lectures and colloquia. It contributes research assistance to IUCN’s Environmental Law Centre and its Commission on Environmental Policy, Law and Administration.
http://www.law.pace.edu/environment/

(1) Pace Energy and Climate Center
The mission of the Pace Energy & Climate Center (formerly The Energy Project) is to reduce the environmental, social and human health burdens of today's predominant forms of electricity production and consumption and to promote climate change solutions. The Center’s multi-disciplinary team aims to accelerate the world's transition to clean, efficient and renewable energy alternatives.
Pace Energy and Climate Center Webpage

Pace Energy and Climate Center’s four program areas:
– Energy Efficiency
– Renewable Energy
– Hidden Cost of Power
– International Sustainability

(2) Energy Efficiency Initiatives
The Energy and Climate Center seeks to advance electricity market rules and utility regulatory policies and practices supportive of greater investment in energy efficient and clean, distributed generation technologies.
Energy Efficiency Initiatives Webpage
- Efficient Use of Electricity and Natural Gas
- Wholesale Electricity Market Reforms
- Building Markets for Combined Heat and Power Applications
- Pay-as-You-Save Northeast Program Launch

(3) **Renewable Energy Initiatives**
The Energy and Climate Center seeks to accelerate the deployment of renewable energy technologies. The Center is deeply engaged with renewable energy technology stakeholders, public interest partners and state and federal agencies. The Center’s role is to solve regulatory problems that directly affect the pace, scope and scale of renewable energy development. These range in scope from breaking down market and regulatory obstacles, to advancing strategies to invigorate consumer demand.

[Renewable Energy Initiatives Webpage](#)

- Renewable Portfolio Standard Design
- Power Scorecard Consumer Education Tool
- Expanding the Supply of Renewable Energy Credits from behind-the-Meter Resources
- Addressing Code Barriers to Distributed Generation Technologies
- Wind Power Education Project
- Hydrogen Your Way Reference Service

(4) **Hidden Cost of Power Program**
The Energy and Climate Center seeks to expose the hidden environmental, public health and security consequences of continued reliance on fossil and nuclear fuels in meeting our energy needs and gaining recognition of these hidden costs in public policy discussions and resource allocation decisions.

[Hidden Cost of Power Program Webpage](#)

- Northeastern States Regional Greenhouse Gas Initiative
- Dirty Diesel Campaign
- Nuclear Accountability Project
- New York Environmental Monitoring Evaluation and Protection Program
- Energy Planning and Power Plant Siting

(5) **International Sustainability Program**
Pace Law School’s Energy and Climate Center is an international leader in assisting developing nations on the most difficult energy issues. Pace is currently engaged in a variety of international projects designed to support wider adoption of renewable energy and energy efficiency measures, conducting most of its international energy activities in partnership with the International Union for the Conservation of Nature and Natural Resources (IUCN), on behalf of international agencies. This effort is led by Dean Emeritus Richard Ottinger, in his capacity as
Chair of the IUCN’s Specialist Group on Energy Law and Climate Change and member of an IUCN Energy and Biodiversity Leverage Initiative.

Recent major projects include editing and drafting for the United Nations Environmental Programme a *Handbook for Legislative Draftsmen on Energy Efficiency and Renewable Energy Laws*. The Manual is designed to help developing countries bypass traditional legislative approaches that often favor more polluting forms of energy by providing model legislation that encourages the use of renewable energy and energy efficiency. Pace has also assisted the UN Department of Economic & Social Affairs (UNDESA) in conducting a *Forum for Parliamentarians from Africa* on options for sustainable energy, and is now preparing for the 15th Session of the UN Commission on Sustainable Development on energy and climate change where IUCN and Pace will conduct two side events. Additionally, Pace is contributing a chapter on renewable energy for the International Bar Association Section on Energy, Environment, Natural Resources and Infrastructure Law’s (SEERIL) Academic Advisory Group to be published in late 2007.

**CENTER FOR HUMANS AND NATURE, NFP**

The Center for Humans and Nature (CHN) is an independent, non-partisan organization that promotes greater conservation, biological and cultural diversity, health, and social justice in the interactions between natural systems and human communities. The organization’s mission is to explore and promote moral and civic responsibilities to human communities and to natural ecosystems and landscapes.

[www.humansandnature.org](http://www.humansandnature.org)

1. **Public Health and Environmental Emergency Preparedness and Adaptation Planning**

Working in collaboration with the Centers for Disease Control and Prevention (CDC) and the Yale University Center for Public Health Emergency Preparedness Planning, the Center for Humans and Nature is conducting research on the ethical issues involved in preparedness planning and adaptation and is helping to create educational materials on ethical issues in emergency planning for public health professionals. Public health preparedness planning covers a wide range of hazards that could cause an emergency situation for public health and safety. Such hazards include pandemic outbreaks of infectious disease, bioterrorism, and extreme weather conditions. Adaptation to climate change and such health preparedness are converging issues that the Center for Humans and Nature is at the forefront of exploring. One aim of this work is to create a richer and more comprehensive dialogue between the environmental and conservation community, on the one hand, and the field of public health, on the other. Thus far, the Center for Humans and Nature is supporting the research, writing, and consultative activities of staff member Bruce Jennings in his work with the CDC and Yale.

Adaption to Climate Change: Expanding Our Moral and Civic Imaginations to the Scope and Urgency of the Challenge
The Adaptation Network co-sponsored with the Center for Humans and Nature (CHN) a two-day working meeting, Adaptation to Climate Change: Expanding Our Moral and Civic Imaginations to the Scope and Urgency of the Challenge. The goal was to assist CHN in integrating adaptation into their scope of work. CHN has offices in New York City, Chicago, and coastal South Carolina. http://www.adaptationnetwork.org/occasional3.html

CENTER FOR INTERNATIONAL ENVIRONMENTAL LAW
The Center for International Environmental Law (CIEL) seeks to strengthen and develop international and comparative environmental law, policy and management world-wide. www.ciel.org/

Climate Change Program
To strengthen the global response to climate change, CIEL's Climate Change Program focuses on impacts to people and ecosystems of the Arctic and Subarctic. The Program works to protect the Earth's climate system through promotion of human rights, forest conservation, and biodiversity protection. CIEL advises key participants in the international policy arena on how to work towards a sustainable, enforceable emissions reduction framework. CIEL is widely recognized as a leading legal research institute, earning respect for our objective analysis and strong commitment to the environment. A key part of CIEL's strategy is to provide legal support and advice to other environmental organizations and representatives of indigenous and other local communities, helping build their capacity to advocate for a just and effective climate regime. http://www.ciel.org/Climate/programclimate.html

Climate Impact Case Studies
CIEL is collecting case studies on the impacts of climate change on vulnerable communities. These case studies give voice to how climate change has and will have a direct and potentially devastating effect on the lives and livelihoods of millions of people around the world. These case studies are posted on CIEL's website for use by the public (subject to any copyright restrictions reserved by the authors). These studies will also be used by CIEL to support climate change work in the areas of human rights, advocacy and policy development, adaptation, and education. Case studies have been conducted in areas including Africa, Asia, Australia, the Pacific, North America, and South America. http://www.ciel.org/Climate/Climate_Impacts.html

CENTER FOR PLANT CONSERVATION
Founded in 1984, the Center for Plant Conservation is a private, non-profit organization dedicated to conserving rare and endangered plants of the US through cultivation and research. It aims to promote conservation and preservation of plant species, to further the study of plant biology, and to educate the public.
http://www.centerforplantconservation.org/

No climate-related activities.

**CHEYENNE MOUNTAIN ZOOLOGICAL PARK**
The Cheyenne Mountain Zoological Park is an independent non-profit organization created in 1938 as a trust for the people of Colorado Springs "for the sole purpose of establishing and maintaining a zoological park to provide recreation, education, conservation and scientific facilities in the field of zoology and related subjects, and to preserve the Zoo in perpetuity for the people of the Pikes Peak region."
www.cmzoo.org

No climate-related activities.

**CHICAGO ZOOLOGICAL SOCIETY**
The mission of the Chicago Zoological Society is to inspire conservation leadership by connecting people with wildlife and nature. The society aims to help people develop a sustainable and harmonious relationship with nature. In doing so, the Society shall provide for the recreation and education of the people, the conservation of wildlife and the discovery of biological knowledge.
www.brookfieldzoo.org

No climate-related activities.

**CLEVELAND METROPARKS ZOO**
The mission of Cleveland Metroparks Zoo is to improve the future for wildlife by exhibiting animals and plants and providing education and conservation programmes that encourage respect and stewardship of the natural world and a better understanding of our place within it.
www.clemetzoo.com

No climate-related activities.

**ENVIRONMENTAL DEFENSE FUND**
Environmental Defense is a leading national, non-profit organization that links science, economics and law to create innovative, economically viable solutions to environmental problems. Some of Environmental Defense’s broad programme areas (both domestic and international) are: water resources; energy; air quality and global atmosphere; solid waste reduction; environmental health; oceans; and wildlife habitats.
http://www.edf.org

[Environmental Defense Fund Global Warming Website](http://www.edf.org)

(1) **EDF’s Approach to Global Warming**

*Key Initiatives:*
• **National Policy**

_**Creating a national framework.**_ Environmental Defense Action Fund, the legislative policy arm of Environmental Defense, is working with Congressional leaders to address global warming while boosting our global competitiveness. EDF has also partnered with leading corporations and other groups through the United States Climate Action Partnership (USCAP) and the Presidential Climate Action Project (PCAP).

• **State and Regional Policy**

_**Find solutions in states.**_ EDF advises local business, community and political leaders on global warming solutions that curb pollution and spur economic growth.

  − _Example of Regional Work_ – California Clean Cars Law: California's landmark Clean Cars Law, passed in 2002, is being challenged by auto manufacturers. It paves the way to reduce global warming pollution from cars, and sixteen states have adopted or announced plans to adopt the regulations.

• **Corporate Partnerships**

_**Partner with corporations.**_ EDF helps forward-thinking companies find real climate change solutions that also deliver business benefits. Many of the partnerships center on reducing greenhouse gas emissions by cutting energy and fuel use.

  − _TXU_ – After launching an aggressive grassroots campaign against TXU's expansion plans, EDF negotiated an agreement to scrap coal-fired power plants in the Southwest.
  − _USCAP_ – As part of an unprecedented alliance, we're working with companies and others to urge the government to: cut greenhouse gas emissions 60-80 percent, create business incentives and, act swiftly and thoughtfully.
  − _Wal-Mart_ – The partnership aims to stop or reverse the growth curve for heat-trapping emissions.
  − _FedEx_ – The partnership delivered fuel-efficient hybrid-electric delivery trucks that cut fuel costs while reducing heat-trapping emissions.
  − _PHH Arval_ – Helping corporate fleets improve fuel economy and go climate neutral.
  − _Environmental Markets Network_ – Collaborating with leading financial experts to pass legislation that caps greenhouse gas emissions and sets up a sound trading system.
  − _Climate Corps_ – Linking MBAs with corporations to cut both costs and global warming pollution.

• **Farm Innovation**

_**Innovate with farmers.**_ EDF is cultivating the idea of growing fuel, as we look to launch a market for renewable energy grown on U.S. farms. These
efforts will reduce global warming pollution while ensuring America's national security and restoring vitality to rural areas.

- **International Leadership**
  
  **Work Internationally.** Environmental Defense is helping developing countries benefit from sound environmental policies while helping America remain an industrial leader and stay competitive.

- **Legal Action**
  
  **Advocate in the courts.** Environmental Defense got its start 40 years ago by waging a science-based legal battle against harmful pesticides. Today, EDF prefers to work cooperatively, but still argue cases in the courts when necessary.
  
  - Environmental Defense Fund was recently a petitioner in *Massachusetts et al. vs. EPA*, in which the Supreme Court ruled that the Environmental Protection Agency can regulate heat-trapping pollution. EDF also took Duke Energy to court, to ensure that they complied with the Clean Air Act; again the Supreme Court ruled in EDF’s favor.

- **Public Outreach**
  
  **Educate the public.** EDF’s most visible outreach is a national ad campaign, distributed through the Ad Council to televisions, radios, newspapers and billboards across the country.
  
  - *Climate 411* – Climate 411 is the voice of Environmental Defense Fund experts, providing plain-English explanations of climate change science, technology, policy, and news.
    

(2) **Resources for Companies**

A key component of EDF’s partnership strategy is creating tools for businesses to cost-effectively reduce their environmental footprint.

**Corporate Tools**

- **Paper Calculator**
  
  This tool quantifies the benefits of better paper choices. The Paper Calculator shows the environmental impacts of different papers across their full lifecycle.
  
  [http://www.edf.org/papercalculator/](http://www.edf.org/papercalculator/)

- **Innovations Review**
  
  Companies find that environmental sustainability helps reduce costs and gain advantages.
  
  [Innovations Review Webpage](http://www.edf.org/papercalculator/)

- **Hybrid Truck Incentive Guide**
  
  This guide offers information on various incentive programs to support the purchase of hybrid trucks. In addition to this guide, Environmental Defense is pleased to offer customized incentive funding assessments for fleets that are considering hybrid truck purchases. The assessments help fleets identify
suitable incentive programs, understand program requirements and navigate
the application process.
Hybrid Truck Incentives Guide Webpage

- **The 4 Cs of Climate Action**
  A how-to guide to reducing your company's global warming pollution
  modeled on the “Three Rs” of “Reduce, Reuse, Recycle.”
  Four Cs Webpage

- **Nano Risk Framework**
  A comprehensive, practical tool for evaluating and addressing potential risks
  of nanoscale materials.
  http://www.nanoriskframework.org

- **Paper Task Force Report**
  A compendium of resources for making smarter paper purchases.

- **MERGE**
  A packaging design tool to help factor environmental impacts into product
  design.
  http://www.greenblue.org

- **Cleaner Diesel Handbook**
  A guide to empower the private sector and others with the means to reduce
  harmful pollution from diesel engines.
  Cleaner Diesel Handbook (PDF)

**ENVIRONMENTAL LAW INSTITUTE**
The Environmental Law Institute is a non-partisan research and education center working
to strengthen environmental protection by improving law, policy, and management
worldwide.
www.eli.org

(1) **Climate Change Program**
ELI is harnessing our nearly 40 years of experience in developing and
implementing environmental laws, policies, and institutions to address the
multiple threats posed by climate change. ELI's Ocean, Invasive Species, and
International Waters Programs are already developing tools and building capacity
to respond to climate change. By engaging a broad range of stakeholders in
research, capacity building, and technical and legal assistance, ELI seeks to
mitigate the causes of climate change and strengthen capacity to adapt to climate
change. ELI activities address the causes of climate change, strengthen capacity to
adapt, improve governance, integrate climate change into invasive species
strategies, advance technologies, and answer constitutional challenges to new
initiatives for climate change.
http://www.eli.org/Program_Areas/climate.cfm

Through its climate change work, ELI seeks to enhance the resilience of
communities and ecosystems around the world. In particular, ELI programs:
− **Strengthen Capacity to Adapt to Climate Change.** ELI is preparing for climate change impacts by strengthening capacity to adapt to climate change through effective laws, policies, institutions, and management practices.

− **Promote Climate Justice.** Building on ELI's long history of advancing environmental justice, ELI is working to ensure that any proposals to reduce greenhouse gases result in an equitable distribution of the environmental and economic impacts of climate controls.

− **Integrate Climate Change into Invasive Species Strategies.** ELI is striving to improve management of invasive species in the context of a changing climate by developing recommendations for robust management and policy decisions under changing conditions.

− **Advance Technologies for Climate Change.** ELI is improving legal and institutional frameworks governing the development, access, transfer, and use of technologies to meet the challenges of climate change.

− **Answer Constitutional Challenges to New Climate Change Initiatives.** ELI anticipates, publicizes, and defends against constitutional attacks on emerging laws and initiatives designed to regulate greenhouse-gas emissions and fight the effects of global climate change.

(2) **Climate Change Activities Report**

ELI's publications and seminars provide unique platforms for public discourse on various aspects of climate change, domestically and internationally. ELI's flagship environmental law and policy publications, the Environmental Law Reporter and The Environmental Forum, as well as the National Wetlands Newsletter, publish leading experts from government, NGOs, and the private sector, as well as ELI staff. Illustrative articles include *The Role of Carbon Sequestration in the U.S. Response to Climate Change — Challenges and Opportunities*, co-authored by a former high-level official in the Clinton Administration, and published in ELR. In his *Around the States* column in The Environmental Forum, ELI Senior Attorney John Pendergrass regularly chronicles the efforts of states and local governments to deal with climate change in the absence of effective national action. ELI recently devoted an entire issue of the National Wetlands Newsletter to the issue of wetlands and climate change. Illustrative seminars include "Reporting on Climate Change: Understanding the Science," "Lessons Learned for the Acid Rain Program Applicable to an Emission Cap and Allowance Trading System for Greenhouse Gases," and "Access to Courts After *Massachusetts v. EPA*: Who Will be Left Standing?"

http://www.eli.org/Program_Areas/climate_activities.cfm

Climate change is also a key component of ELI's Ocean Program and International Water Program, and of its domestic and international work on land and biodiversity, as well as ELI's work to promote technology for sustainable development. ELI develops and improves legal frameworks that are practical and feasible; convenes stakeholders to identify solutions and build consensus; and hosts programs that build the capacity of government officials, private actors, and community groups.
Recent Activities:

• In November 2007, ELI organized an event in partnership with South Africa’s Northwest University on Climate Change and Adaptive Governance in the Southern African Water Sector.

• In November 2007, ELI Staff Attorney Sandra Nichols gave a presentation on "Adaptation to Sea Level Rise: Federal and State Approaches" at the Ninth Annual Northeast Florida Environmental Summit, Rising to the Challenge: Mitigation and Adaptation Strategies to Combat the Impacts of Sea Level Rise. Florida Coastal School of Law Summit Website / ELI's Presentation

• In July of 2007, Maryland appointed ELI to serve on the Adaptation and Response Working Group of the Maryland Climate Change Commission.

FORESTA INSTITUTE FOR OCEAN AND MOUNTAIN STUDIES
Created in 1962, the Foresta Institute for Ocean and Mountain Studies is an educational, scientific and cultural organization affiliated with international to local environmental groups. It sponsors projects and meetings on curricula, teacher education and youth training in resource conservation, biodiversity and life quality.

No Website

FOUNDATION FOR ENVIRONMENTAL SECURITY AND SUSTAINABILITY
The Foundation for Environmental Security and Sustainability (FESS) is a public policy research and educational foundation established to advance knowledge and provide practical solutions to alleviate or eliminate environmental risks to security and stability in vulnerable geographic regions and countries. FESS was chartered with a mandate to identify environmental stresses that contribute to the political, economic, and social instability of regions and countries, and to develop solutions to mitigate these stresses before they become destabilizing.

www.fess-global.org

(1) Energy Security
Energy Security is an emerging area of focus for FESS. With Africa at the center of its research agenda on this topic, FESS works in close collaboration with the Partnership for African Environmental Sustainability (PAES). The overarching goal is to help formulate strategies and policies that expand the use of modern bioenergy as a means to meet livelihood, natural resource, and security needs. Research and assessment initiatives will seek to promote smallholder production and processing schemes to achieve energy and livelihood security. To date, FESS's partner PAES has completed one exploratory study of Africa's bioenergy potential and published several articles on the potential rewards and drawbacks of biofuels. Other studies are in the planning stages.

http://www.fess-global.org/EnergySecAssess.cfm
Sustainability Bioenergy in Africa: Issues and Possibilities

“Sustainability Bioenergy in Africa: Issues and Possibilities” is the most recent article published on the potential rewards and drawbacks of biofuels based on an exploratory study of Africa’s bioenergy potential. Africa’s population is trapped in a vicious cycle of low energy consumption, heavy dependence on traditional biomass energy, poverty and vulnerability to climatic variation. Modern bioenergy offers unique opportunities toward a strategy for unlocking this trap and developing smallholder business potential in Africa. With its tropical climate and huge land mass, Africa’s bioenergy potential is almost unlimited. Harnessing it requires, at least, a two-pronged strategy: (i) promoting smallholder production and processing schemes; and (ii) encouraging socially and environmentally-sustainable large scale investment. FESS Senior Fellow and PAES President and CEO Mersie Ejigu authored the article. Sustainability Bioenergy in Africa: Issues and Possibilities Article (PDF)

GEORGE WRIGHT SOCIETY

Created in 1980, the George Wright Society promotes protection, preservation, and management of cultural and natural parks and protected areas through research and education. It fosters interdisciplinary cooperation and communication and seeks to build support and understanding for the importance of parks. www.georgewright.org

(1) What Should Protected Areas Managers Do in the Face of Climate Change? What Should Protected Areas Managers Do in the Face of Climate Change? (PDF)

GLOBAL LAND COVER FACILITY, UNIVERSITY OF MARYLAND

The Global Land Cover Facility (GLCF) is a center for land cover science with a focus on research using remotely sensed satellite data and products to assess land cover change for local to global systems. The Center’s mission is to improve comprehension of the nature and causes of land cover change and its impact on the earth. http://www.landcover.org

(1) Research

The Global Land Cover Facility is a research center focusing on the investigation of land cover dynamics and the development and distribution of products that explain aspects of land cover and land cover change. Interests in the Carbon Cycle and Global Climate Change have involved GLCF in developing forest change products. Past research efforts were directed at boreal forests in Canada and Russia, and tropical rainforests in the non-Brazilian Amazon and Central Africa. Recent focus has concentrated research and product development in the subtropical Atlantic forest of South America. GLCF research is also coordinated with the MODIS team at the University of Maryland Geography Department. The MODIS related investigations aim to develop tools and products to answer Carbon and Climate questions but also feed into the assessment programs of
Federal and international environmental agencies. GLCF research is also concerned with global conservation efforts, and helping trans-national and national agencies to better manager their resources by using land cover products.

http://glcf.umiacs.umd.edu/research/

(2) **Deforestation Mapping Group (DMG)**
The Deforestation Mapping Group (DMG) has been a primary component of the GLCF research team. DMG has focused upon creating baseline forest cover products and making them available to the various user groups interested in forest cover extent throughout the world. DMG and GLCF research in general work with partners in both the NGO and government realms to develop an operational Global Observation of Forest Cover (GOFC) type activity.

(3) **Global Land Cover Change**
The Land-Cover and Land-Use Change (LCLUC) program will use NASA remote sensing technology to improve understanding of human interaction with the environment, and thus provide a scientific foundation for sustainability, vulnerability and resilience of land systems and their use.

http://lcluc.umd.edu/

(4) **Amazon and Central Africa Forest Change Products**
The NASA Landsat Pathfinder Humid Tropical Deforestation Project mapped global deforestation for the humid tropics. Data sets from both the TM (Thematic Mapper) and MSS (Multispectral Scanner System) of Landsat were used for three time periods in the 1970s, 1980s, and 1990s. The project focused on the three regions where most of the tropical deforestation in the world has occurred - the Amazon Basin, Central Africa, and Southeast Asia. Mapping deforestation in these three regions accounts for the majority of deforestation activities in closed tropical forests worldwide. These products are country-based representations of forest cover change.

http://glcf.umiacs.umd.edu/data/pathfinder/

**KHALED BIN SULTAN LIVING OCEANS FOUNDATION**
The Living Oceans Foundation is dedicated to conservation and restoration of living oceans and pledges to champion their preservation through research, education and a commitment to science without borders. Science Without Borders® is the overarching theme of the Khaled bin Sultan Living Oceans Foundation. The objectives of the Living Oceans Foundation are to promote and conduct research into and education (including the publication of useful results of research) in conservation, restoration of the aquatic environments and resources, the medical benefits derived from aquatic life and surrounding environments.

http://www.livingoceansfoundation.org

(1) **Patterns of Biodiversity and Climate Change Impacts in the Bahamas**
The Patterns of Biodiversity and Climate Change Impacts in the Bahamas: Data to Support the Planning of Marine Reserves project will support the Bahamian
government’s decision making process to select new areas for marine reserves in their territorial waters. It will involve in-depth analysis of data previously collected in and around the Bahamas Islands on biodiversity, fisheries habitat, and the impacts of hurricanes and climate change. Outcomes of the project are expected to have a significant impact on the marine reserve site selection process and will result in a more sustainable network of marine reserves in the Bahamas.

NOTE: No country has ever incorporated the effects of climate change into their planning of marine reserves and this project will set a global precedent.

(2) **11th International Coral Reef Symposium (ICRS)**
The Living Oceans Foundation has agreed to be a Barrier Reef Sponsor for the 11th International Coral Reef Symposium scheduled to take place in Ft Lauderdale, Florida, July 7-11, 2008. REEFS FOR THE FUTURE is the scientific theme of the Symposium, highlighting one of the most important international treasures: coral reefs. Degradation due to factors including pollution, overfishing, and climate change, threaten destruction of these ecosystems on an unprecedented global scale. The results of the 11th ICRS will be timely and readily accessible in a variety of web-based, CD, and traditional formats.

**LOS ANGELES ZOO**
The Los Angeles Zoo was founded in 1966 to serve the community; create an environment for recreation and discovery; inspire an appreciation of wildlife through exhibitory and education; ensure the highest level of animal welfare; and support programs that preserve biodiversity and conserve natural habitat. The Los Angeles Zoo is owned and operated by the City of Los Angeles. The Greater Los Angeles Zoo Association (GLAZA) was created in 1963 as a private, nonprofit, fundraising organization to support the Los Angeles Zoo in its mission to nurture wildlife and enrich the human experience. GLAZA's primary responsibility is to seek and provide financial support for the Zoo’s programs and capital projects.

[www.lazoo.org](http://www.lazoo.org)

(1) **Green LA**
The City of Los Angeles is making efforts towards becoming a more sustainable and environmentally friendly City. Embarking on an ambitious transformation of the cities utilities, the Los Angeles Department of Water and Power will transition to 35% of its total electricity being from renewable sources by 2020. Since the Los Angeles Zoo is owned and operated by the City of Los Angeles, it will naturally be involved with the Green LA program. For information and project details, please see [GREEN LA: An Action Plan to Lead the Nation In Fighting Global Warming](http://www.lacity.org/ead/environmentla/)

**MARINE CONSERVATION BIOLOGY INSTITUTE**
Marine Conservation Biology Institute (MCBI) is a non-profit corporation organized exclusively for educational, scientific and charitable purposes. MCBI has become one of
the world’s most influential marine conservation organizations. MCBI advocates for the new multidisciplinary science of marine conservation biology, and for actions that natural and social scientists consider essential to maintain the integrity of life in the sea. MCBI believes that marine ecosystem-based management is the way to protect, recover and sustainably use the living sea. The mission of MCBI is to advance the science of marine conservation biology and to promote understanding and cooperation essential to protecting and restoring the Earth’s biological integrity. MCBI shapes the marine conservation agenda by: bringing scientists together to address the highest-impact emerging issues; focusing global media attention on devastating fishing-practices such as bottom trawling; and working in US and global political arenas to secure protection for marine ecosystems.

www.mcbi.org

No climate-related activities.

NATIONAL AUDUBON SOCIETY
The mission of the National Audubon Society, created in 1905, is to conserve and restore natural ecosystems, focusing on birds and other wildlife for the benefit of humanity and the earth's biological diversity.
www.audubon.org

(1) Global Warming
The energy platform delivered by Audubon and other environmental leaders at the outset of the 110th Congress offers important ideas for reducing global warming while ending our nation’s dangerous addiction to oil. Read it, or listen to the teleconference to learn more.
http://www.audubon.org/globalWarming/

(2) Audubon's Position on Wind Power
Audubon strongly supports properly-sited wind power as a clean alternative energy source that reduces the threat of global warming. Wind power facilities should be planned, sited and operated to minimize negative impacts on bird and wildlife populations.

Protecting Birds and Wildlife: While Audubon strongly supports wind power and recognizes it will not be without some impact, production and transmission facilities must be planned, sited and operated in concert with other actions needed to minimize and mitigate their impacts on birds and other wildlife populations. Several federal and state laws require this and the long-term sustainability of the wind industry depends on it. Wind power facilities impact birds from direct collisions with turbines and related facilities, such as power lines. Wind power facilities can also degrade or destroy habitat, cause disturbance and displacement, and disrupt important ecological links. These impacts can be avoided or significantly reduced, however, with proper siting, operation and mitigation.

Audubon supports the adoption of federal and state guidelines on the study, siting,
operation and mitigation of wind power. Guidelines should provide developers, permitting agencies and conservation groups with the legal, technical and practical steps needed to minimize impacts on birds and other wildlife. Guidelines should provide the following essential elements:

- Minimum pre-permitting study requirements and guidance on study methods, frequency and acceptable data sources to ensure that wind power is sited in appropriate locations
- Clearly delineated siting criteria that designate areas where wind power should not be allowed, such as Important Bird Areas, major migratory corridors, wilderness areas, national parks, wildlife refuges, and other sensitive habitat such as wetlands and riparian corridors
- Clearly defined monitoring and mitigation requirements in permits, with periodic reviews and requirements for adaptive management if impacts significantly exceed levels allowed by permit
- Guidance on cumulative population impacts assessment and mitigation.

Audubon also encourages wind developers and permitting agencies to consult with wildlife experts, including Audubon staff and local chapters, to help inform study and siting decisions.

http://www.audubon.org/campaign/windPowerQA.html

NATIONAL PARKS CONSERVATION ASSOCIATION
The National Parks Conservation Association was founded in 1919 to protect and enhance America’s National Parks for present and future generations. The NCPA plays a crucial role in the preservation, promotion and improvement of the national parks system. It is concerned with planning, management and evaluation of national parks throughout the country.

www.npca.org

(1) Unnatural Disaster: Global Warming and Our National Parks
NCPA’s report, Unnatural Disaster, says we can still halt the most severe effects of climate change if we take action now. NPCA offers recommended actions for federal, state, and local governments, along with individuals, to take to slow, and in some cases, halt the damage to our national parks. The national parks offer a unique opportunity to draw attention to America’s priceless resources at risk, and to showcase opportunities to act to protect them.

http://www.npca.org/globalwarming/

Unnatural Disaster Full Report (PDF)
Unnatural Disaster Brochure (PDF)
A guide outlining what we need to do now to protect our National Parks for future generations.

NATIONAL WILDLIFE FEDERATION
The National Wildlife Federation was created in 1936 to educate, inspire and assist individuals and organizations of diverse cultures to conserve wildlife and other natural
resources and to protect the earth’s environment in order to achieve a peaceful, equitable and sustainable future.

http://www.nwf.org

(1) Global Warming
National Wildlife Federation works to reduce global warming pollution by 80% by 2050 by demanding climate change legislation that includes a cap-and-trade system and dedicated funding to address the impacts of global warming on America's natural resources. NWF plans to achieve this goal by reducing global warming pollution by 2% every year for the next 40 years.

http://www.nwf.org/globalwarming/

(2) Investing in America’s Natural Resources
National Wildlife Federation’s report that encourages Congress to take action now and pass global warming legislation which:
- Reduces global warming pollution by 2 percent annually through 2050 with a cap-and-trade program; and
- Invests dedicated financial resources in restoring and protecting natural resources threatened by global warming.

Investing in America's Natural Resources Full Report (PDF)

(3) Climate Action Center
NWF’s advocacy website that is continuously updated information about global warming and climate-related issues in Congress.

Climate Action Center Website

(4) Campus Ecology Program
The Campus Ecology program of the National Wildlife Federation promotes climate leadership and sustainability among colleges and universities by providing resources and technical support, creating networking opportunities and organizing education events.

http://www.nwf.org/campusecology/

(5) Chill Out: Campus Solutions to Global Warming
Chill Out: Campus Solutions to Global Warming recognizes campuses and campus leaders for their efforts to solve global warming. Campuses across the country are taking steps to confront global warming. Through energy efficiency, renewable energy, habitat restoration and awareness projects, campuses are leading the way. The competition is closed, but check out the winners.

http://www.nwf.org/campusEcology/chillout/

(6) NWF on Facebook
NWF utilizes Facebook with a number of groups open to anyone interested in learning more about campus solutions to global warming.

– NWF Campus Ecology Facebook Group
NATURAL HERITAGE INSTITUTE
The Natural Heritage Institute (NHI) is a non-governmental, non-profit organization founded in 1989 with a central mission to restore and protect the natural functions that support water-dependent ecosystems and the services they provide to sustain and enrich human life. NHI works to foster conservation and sustainable use of the world’s limited stock of natural resources by improving laws that govern and the institutions that manage them.

www.n-h-i.org

(1) Climate Change
Since 2001, NHI has been engaged in (1) building tools to better understand the policy implications of climate change and (2) developing adaptive strategies.
http://www.n-h-i.org/programs/climate-change.html

(2) Climate Change Adaptation
NHI plans to apply a new generation of analytical tools to explore adaptation options at a set of “learning laboratories” around the world to develop a knowledge bank of effective management strategies that could reduce the impact of climate change on biodiversity. Some of these “learning laboratories” will be shared water systems that are subject to multi-jurisdictional management, which makes responding to new threats all the more challenging. Since many of the larger river basins in the world define international boundaries or flow from one nation into another, good models for cooperative responses to climate change are urgently needed. NHI is currently focusing on the shared water system at the U.S.-Mexico border, the Rio Grande/Rio Bravo. NHI is also considering many other transboundary water systems as candidates.
http://www.n-h-i.org/programs/climate-change/climate-change-adaptation.html

(3) Developing Adaptive Strategies for Tidal Marshes
Tidal marshes and the services they provide are products of the shifting interface between oceans, estuaries, and upstream watersheds. NHI is working in South San Francisco Bay to develop an analytical framework to investigate this interface under current and potential future conditions. The project will link a set of models to produce estimates of water and sediment flux to the intertidal zone, then simulate and predict the distribution of wetlands and marsh vegetation classes under sea level rise and changes in salinity. Multiple scenarios to drive the models will be derived from sea level rise scenarios and climate scenario ensembles via statistical downscaling. NHI will use these to develop watershed management strategies to ameliorate the negative impacts of global warming and sea level rise on the ecosystem services of the tidal marsh.
Publications on Climate Change Adaptation

Publications: (Author: Gregory Thomas)

- Adaptive Strategies for Climate Change in Africa
- Hard Wiring Environmental Restoration into Climate Change Adaptations by Major Water Supply and Power Agencies in the Am. West
- Water Storage Innovation for Climate Adaptation and River Restoration

NATURAL RESOURCES DEFENSE COUNCIL

Founded in 1970, The Natural Resources Defense Council (NRDC) is a non-profit membership organization dedicated to protecting America’s endangered natural resources and to improving the quality of the human environment.

http://www.nrdc.org/

1. Global Warming Issues
   http://www.nrdc.org/globalWarming/

2. Solving Global Warming
   A four-point action plan that will drastically cut U.S. global warming pollution.

   NRDC’s Four-point Action Plan:
   1. Boost Energy Efficiency
   2. Better Cars & Smart Growth
   3. Biofuels & Renewable Energy
   4. Return Carbon to the Ground

3. Beat the Heat
   The Natural Resources Defense Council (NRDC) and the Stop Global Warming Virtual March have launched Beat the Heat, an interactive map that highlights the global warming solutions and consequences that matter most to people across the country (see the map at BeatTheHeat.nrdc.org). The two groups launched the map to help people share their concerns about global warming and their desire for solutions -- on an individual and a national scale.
   http://beattheheat.nrdc.org/

   Continuing on the business-as-usual path will make global warming not just an environmental crisis, but an economic one as well. That’s why we must act immediately to reduce global warming emissions 80 percent by 2050 and take ourselves off the business-as-usual path. NRDC recommends the following federal actions to curb emissions and avoid the worst economic impacts expected from global warming:

   1. Enact comprehensive, mandatory limits on global warming pollution to stimulate investment in all sectors and guarantee that we meet emission targets. A mandatory cap will guarantee that we meet emissions
targets in covered sectors and will drive investment toward the least costly reduction strategies. If properly designed to support efficiency and innovation, such a program can actually reduce energy bills for many consumers and businesses. A successful program will include 1) a long-term declining cap, 2) Comprehensive coverage of emitting sources, 3) pollution allowances used in the public interest, 4) allowance trading, and 5) limited use of offsets.

2. **Overcome barriers to investment in energy efficiency to lower abatement cost starting now.** Multiple market failures cause individuals and businesses to underinvest in cost-effective energy efficiency and emerging low-carbon technologies. Price signals alone will not adequately drive these investments, which are already profitable at current energy prices. Therefore, while a mandatory cap on emissions is essential (and the associated allowance value can substantially fund efficiency), many of the opportunities require additional federal, state, and/or local policy to overcome barriers to investments. Specifically, there are substantial gains to be realized in building, industry, and appliance efficiency and in smart transportation such as advanced vehicles and smart growth.

3. **Accelerate the development and deployment of emerging clean energy technologies to lower long-term abatement costs.** To accelerate the “learning by doing” needed to develop an affordable low-carbon energy supply, we must support rapid development and deployment of renewable electricity, low-carbon fuels, and carbon capture and disposal that sequesters carbon dioxide in geological formations deep beneath the earth’s surface.

NRDC: [The Cost of Climate Change Fact Sheet](https://www.nrdc.org/globalWarming/energy/contents.asp)

(5) **Six Energy Sector Opportunities for Solving Global Warming**

In a policy report titled *The New Energy Economy*, NRDC outlines six energy-sector opportunities that can help America reduce global warming pollution. The next step is decisive action by the U.S. government to facilitate these investments and reduce our global warming pollution the necessary 80 percent, or 10.6 billion tons, by 2050. [http://www.nrdc.org/globalWarming/energy/contents.asp](http://www.nrdc.org/globalWarming/energy/contents.asp)

**Six Energy Sector Opportunities for Solving Global Warming:**

1. **Building and appliance efficiency** to provide the same comfort and services with less energy.
2. **Vehicle efficiency & smart growth communities** help cars go farther on less fuel and reduce vehicle travel.
3. **Industrial efficiency** such as combined heat and power reduce industrial energy use.
4. **Renewable electricity** from sources such as wind power and solar power has the potential to supply 40 percent of our energy needs.
5. **Low-carbon transportation fuels** such as biofuels made from switchgrass can replace imported oil.
6. **Carbon capture and disposal** of CO₂ stores emissions from coal-fired power plants in geologic structures deep in the Earth, where it is gradually absorbed.

(6) **In Hot Water: Water Management Strategies to Weather the Effects of Global Warming**

*In Hot Water*, a report by the NRDC released in July 2007, assesses the effects of global warming on water supplies in the west. This NRDC report breaks new ground by analyzing the effects of global warming on a full range of water management tools and offering recommendations to meet the challenge. As the hotter, drier weather already afflicting the region becomes more common, officials responsible for keeping the taps flowing will need to take bold measures now, including conservation and efficiency, and supporting measures to control and reduce global warming in the future.

http://www.nrdc.org/globalwarming/hotwater/contents.asp

**In Hot Water: Water Management Strategies to Weather the Effects of Global Warming Full Report** (PDF)

(7) **Climate Change Impact Reports**

The NRDC has released numerous reports on the impacts of global warming and climate change. These can be found on the NRDC’s [Global Warming](http://www.nrdc.org/globalwarming) webpage under *In Brief Articles* or *In Depth Articles*. See the [NRDC Policy Solutions](http://www.nrdc.org/globalwarming) section for more expert analysis of environmental issues. You may also wish to view the working materials in the [NRDC Document Bank](http://www.nrdc.org/globalwarming).

**Reports:**

- **The Cost of Climate Change: What We’ll Pay if Global Warming Continues Unchecked** May 2008

  A report released in May 2008 by researchers at Tufts University, commissioned by the Natural Resources Defense Council (NRDC), presents two ways of estimating the costs of inaction on climate change, both leading to staggering bottom lines. A comprehensive estimate, based on state-of-the-art computer modeling, finds that doing nothing on global warming will cost the United States economy more than 3.6 percent of GDP - or $3.8 trillion annually (in today’s dollars) - by 2100. On the other hand, a detailed, bottom-up analysis finds that just four categories of global warming impacts -- hurricane damage, real estate losses, increased energy costs and water costs -- will add up to a price tag of 1.8 percent of U.S. GDP, or almost $1.9 trillion annually (in today’s dollars) by 2100.

  The report estimates U.S. economic impacts from global warming in two ways: a detailed focus on four specific impacts, and a comprehensive look at the costs to the country as a whole. The report’s detailed accounting of costs begins with historical data for four especially important climate impacts: hurricane damages, real estate losses, energy costs, and water costs. The report then builds upward to estimate the impact of future climatic conditions.
in these four impact areas. The second part of the analysis is a comprehensive view of climate change impacts: the report takes a general rule about how the climate affects the country as a whole and then applies that rule to business-as-usual climate forecasts. Although the detailed impact studies can provide only a partial accounting of the full economic costs estimated by the report’s comprehensive model, the impact studies allow us to examine the costs of climate change with greater specificity for the particular case of the United States.

Read the full report at http://www.nrdc.org/globalwarming/cost/contents.asp

– Feeling the Heat in Florida: Global Warming on the Local Level
NRDC's study, "Feeling the Heat in Florida: Global Warming on the Local Level," which synthesizes the results of a number of international, national, and local studies, is designed as a tool for Florida's leaders, providing specific, localized projections that will inform important decisions to come. Read the full report at http://www.nrdc.org/globalWarming/florida/flainx.asp

**PRIMARILY PRIMATES**
Primarily Primates, Inc. is a non-profit sanctuary in Bexar County, Texas that operates to house, protect, and rehabilitate various non-native animals. The organization provides lifetime sanctuary and rehabilitation for primarily apes and apes and monkeys, as the name implies, who are no longer needed by their owners. The organization works with the Species Survival Programme to protect endangered species. www.primarilyprimates.org

No climate-related activities.

**REEF CHECK FOUNDATION**
The Reef Check Foundation is an international non-profit organization dedicated to conservation of two ecosystems: tropical coral reefs and California rocky reefs. The Foundation’s mission is to obtain high quality scientific data on the health of marine and coastal ecosystems, specifically coral reefs on a global scale, and to raise public awareness about the value of marine and coastal ecosystems, specifically coral reefs, problems facing their health and solutions to these problems. The Reef Check Foundation is the United Nations’ official community-based reef monitoring program. www.reefcheck.org

(1) The Global Coral Reef Crisis
The report revealed the extent of human impacts on reefs and concluded that there was virtually no reef in the world that remained untouched by human impacts, such as over fishing, pollution and climate change.
The Global Coral Reef Crisis: Trends and Solutions Webpage
The Global Coral Reef Crisis: Trends and Solutions Executive Summary (PDF)
The Global Coral Reef Crisis: Trends and Solutions Full Report (PDF)
(1) Arctic Odyssey: Global Warming Symposium
Arctic Odyssey: Global Warming Symposium (July 8-20, 2009)
On this journey into the Russian Arctic Circle aboard the polar-class icebreaker Kapitan Khlebnikov, a panel of distinguished scientists, including Smithsonian’s Aron Crowell, Alaska Director of the Arctic Studies Center, will join moderator Sam Donaldson to present a multi-faceted introduction to the complex issues of global climate change. Lively debates on climate change will be complemented by excursions to sites that illustrate these issues, giving first-hand experience and making the abstract real. Cross the Arctic Circle to some of the most remote regions on Earth, and see the life that flourishes in this fragile ecosystem, from tufted puffins to musk oxen to Arctic poppies. Visit remote Chukchi villages and hear how climate change is affecting the local people. As the polar regions change, so will the world, and this voyage into the Russian Arctic will lead you to informed and unexpected conclusions about these front-page issues.
http://www.smithsonianjourneys.org/tours/arctic2009/

(2) Climate Change and Biodiversity in the Americas Symposium
The Climate Change and Biodiversity in the Americas Symposium was held from Feb 25-29, 2008 in Panama as a forum for leading scientists to present the results of research and monitoring activities of climate change and forest biodiversity throughout the Americas. The goal of the symposium was to establish a cooperative science, research and monitoring network of activities that interlink biodiversity conservation and sustainability, policy responses, and adaptation to climate change throughout the Americas. The meeting was sponsored by the Government of Canada, the Smithsonian, the Convention of Biological Diversity, The Heinz Center, UNESCO, IUFRO, WMO, IAI and the Caribbean Community Climate Change Centre.
www.climatechangeandbiodiversity.ca
Symposium Program (PDF)

(3) The Effect of Climate Change on Migratory Birds
The Smithsonian Conservation and Research Center assesses the impacts of climate change patterns on animal populations through long-term demographic studies that take advantage of temporal and spatial variability in weather across environmental gradients. In this project, the Center extends their long-term studies of birds in New England forests in ways that allow them to identify and assess how weather, and ultimately, climate, in combination with biotic factors, affects the spatial distribution, abundance, and demography of bird species that breed in temperate forests.
The Smithsonian **Conservation and Research Center** is one of the world’s most extensive programs of conservation biology research and its central mission is to preserve threatened species and habitats through research, professional training, and environmental education. The CRC is a Directorate of the Smithsonian’s National Zoological Park.

http://nationalzoo.si.edu/ConservationAndScience/CRC/

**SNOW LEOPARD TRUST**

Founded in 1981, the Snow Leopard Trust is a tax-exempt non-profit organization dedicated to conserving snow leopards, their prey and habitat through a balanced programme which meets the need of the local people and the environment. Emphasis is upon cost effective and co-financed in-situ initiatives, which are implemented through local partnerships, and managed by range-country Snow Leopard Conservationists (SLCs).

www.snowleopard.org

*No climate-related activities.*

**ST. LOUIS ZOOLOGICAL PARK**

Establish in 1913, the St. Louis Zoological Park’s central mission is to conserve animals and their habitats through animal management, research, recreation, and educational programs that encourage the support and enrich the experience of the public. The Park, with more than 4,300 animals living on 90 acres in a wide variety of habitats, uses the latest technology to focus public attention on animal diversity, ecology and conservation.

www.stlzoo.org

**Science Seminars**

The Academy of Science of St. Louis and the Saint Louis Zoo co-sponsor community-wide Science Seminars covering contemporary topics in global ecology and the environment featuring St. Louis and regional scientists. All programs are presented so those with little scientific background can gain a better understanding of how each topic affects our world or has personal connections. The series is free and open to the public.

http://www.stlzoo.org/education/forteachers/20072008scienceseminars.htm

**THE HEINZ CENTER**

The Heinz Center is a nonprofit, nonpartisan think tank dedicated to improving the scientific and economic foundation for environmental policy. The Center’s core objectives are to encourage and support efforts to preserve and conserve natural resources; to enhance environmental quality.

http://www.heinzctr.org/
(1) **Global Change Program**

The broad goal of the Global Change Program is to continue analysis of policy responses to global environmental changes, both in terms of mitigating change and in terms of preparing for change.

http://www.heinzcenter.org/Programs/Global_Change/index.shtml

(2) **Global Energy Assessment (GEA)**

The central objective of the Global Energy Assessment (GEA) is to provide a knowledge base essential to global energy policy development and future energy strategies. The GEA is structured around four main areas of analysis: (1) Major Global Issues and Energy: assessing the challenges; (2) Energy Resources and Technological Options: assessing the components available to build future energy systems; (3) Describing Possible Sustainable Futures: assessing the composition of systems that address energy challenges; and (4) Policies Advancing Energy for Sustainable Development: assessing the policy options that address challenges and provide options for future energy systems.

http://www.iiasa.ac.at/Research/ENE/GEA/index.html

(3) **Ecothresholds Initiative**

The Heinz Center’s Ecothresholds Initiative was created to explore the subject of defining acceptable levels of greenhouse gas concentrations and to determine how to anticipate and deal with rapid changes in ecosystems. Since 2005, the Heinz Center has partnered with The Nature Conservancy and the Joint Global Change Research Institute to successfully convene members of the scientific and policy communities to explore the science behind thresholds and their implications for decision-making. The project promotes understanding of the physical, natural, and social dynamics that underlie ecological thresholds in order to better inform ongoing adaptation measures and response options across scales of decision-making.

http://www.ecothresholds.org/
Ecothresholds Project Brochure (PDF)

(4) **Understanding the Role and Importance of Methane to Climate Change**

The long-term goal of the program called “Methane 2100” is to document the global distributions and concentrations of methane in the atmosphere by sensors aboard a polar retrograde orbiting satellite. The ITT Corporation has committed to partner in this endeavor to develop technologies to monitor methane releases and to participate directly in the field programs.

(5) **The Global Change Advisory Committee**

The Global Change Advisory Committee includes Heinz Center Trustees interested in the broad suite of topics encompassed in global change. The committee provides the Center with strategic oversight and advice on issues of global environmental change, including: climate change, nitrogen issues, land-cover and land-use change, loss of biodiversity, global Earth observations, participation in international scientific assessments, and others as appropriate.
THE NATURE CONSERVANCY
Created in 1950, the organization acquires and manages habitat in the US for rare and endangered species targeted by a Nature Conservancy-developed database of biodiversity information. It works with states to identify ecologically significant natural areas. The Nature Conservancy’s mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.
http://www.nature.org/

(1) Global Climate Change Initiative
The Nature Conservancy is joining with policy makers, community members, businesses, scientists, industry leaders and others to slow the pace of climate change. We work to reduce the accumulation of heat-trapping gases in the atmosphere and help natural areas adjust to the impacts of climate change.
http://www.nature.org/initiatives/climatechange/

• What the Nature Conservancy is doing
  The Nature Conservancy is addressing climate change by:
  – Reducing emissions from deforestation
  – Helping natural areas adapt to the impacts of climate change
  – Supporting policies to reduce emissions

• Reducing Deforestation
  The Nature Conservancy believes that addressing deforestation must be a part of a comprehensive global climate change strategy that addresses all major sources of carbon emissions. We are encouraging the world’s governments to create a flexible framework that incorporates the actions of developing countries with meaningful incentives to encourage the preservation and restoration of forests. From Belize to China, The Nature Conservancy is conducting research around the world to demonstrate how to measure the amount of carbon captured by forests. The Conservancy supports forest and other conservation projects that: sequester carbon (or prevent its release by avoiding deforestation), increase regional biodiversity, and foster sustainable livelihoods among local communities. The Conservancy also maintains several forest carbon projects in which they are measuring carbon storage and facilitating the sale of carbon “credits” to governments and businesses looking to offset their carbon emissions. At the same time, the Conservancy is looking at national-level approaches to reduce emissions from deforestation, measure avoided emissions, and develop credible mechanisms with which to compensate governments and communities for their forest emission reductions.
  – Projects
    Garcia River Forest, California – On California's north coast, the Conservancy is working to restore over 23,000 acres of forest to help reduce climate change.
**Rio Bravo, Belize** – The Rio Bravo climate action project involves the conservation and sustainable management of more than 153,000 acres of forest in northwest Belize.

**Noel Kempff, Bolivia** – Through a unique partnership, this Nature Conservancy project is helping protect 1.5 million acres of Noel Kempff Mercado National Park in northeastern Bolivia.

**Guaraqueçaba Environmental Protection Area, Brazil** – These projects seek to restore and protect approximately 50,000 acres of tropical forest within the Guaraqueçaba Environmental Protection Area in southern Brazil.

**Midwest Forest Restoration, United States** – The Midwestern forest restoration project involves the restoration of almost 1,000 acres of forest in Ohio and Indiana. It is estimated that the project will reduce, avoid or mitigate approximately 150,000 metric tons of CO2 equivalent over 40 years by bringing back native forests to this area.

**Tengchong Forest, Yunnan Province, China** – A joint project between the Conservancy and Conservation International (CI) in Tengchong, China, this site recently became the first project to be certified under the comprehensive CCB standards. Over 30 years, the project will remove nearly 160,000 tons of carbon dioxide from the atmosphere.

- **Helping People and Nature Adapt**
  Around the world, Conservancy scientists are analyzing the likely impacts of climate change on plants, animals and natural communities. With this information, the Conservancy is: Designing and implementing conservation strategies to lessen these harmful impacts; Helping prioritize the places we should conserve; and Identifying the most effective approaches that can be applied in similar sites. From North Carolina’s Albemarle Sound to Florida’s coral reefs to China’s Yunnan Province, the Conservancy is developing strategies that will help natural areas adapt to the inevitable impacts of climate change.

  - **Adaptation Work**
    - **Coral reefs** – Coral reefs are vulnerable to climate change because high ocean temperatures cause some corals to "bleach," or lose their colorful symbiotic algae. The Conservancy is leading a global effort to identify corals that are resilient to bleaching events and to ensure these "survivors" are protected through effectively managed, large-scale marine protected area networks worldwide.
    - **Albemarle Sound of North Carolina** – In the Albemarle Sound of North Carolina, scientists project that sea-level rise will eventually inundate the coastal ecosystem. The Conservancy is developing potential restoration projects that would help protect the sound, including planting native cypress forests, restoring submerged aquatic vegetation beds, establishing reefs to provide habitat for native oysters, and planting brackish marsh grasses on shore lands that are likely to be submerged.
Alaska – The Arctic may be harder hit by climate change than anyplace in the world. In Alaska, the Conservancy is connecting leading climate change scientists with resource managers from federal and state agencies so that climate projections can be integrated into the decisions made by public land management agencies.

Sierra Nevada Mountains of California – In the Sierra Nevada Mountains of California climate change is shifting vegetation and natural communities upslope. The Nature Conservancy, the USDA Forest Service, and partners are researching an area in the Sierra old-growth forest to quantify these impacts of climate change and to develop strategies to conserve unique natural communities in the place John Muir called the "Range of Light."

Florida Keys Reef Resilience Project – In the Florida Keys, the Conservancy and partners are working to bolster the resilience of coral reefs to bleaching caused by warming seas. We are transplanting healthy fragments of staghorn coral onto reefs and studying their growth and survival rates — advancing coral reef science while restoring an important structural component of the reef.

New Mexico – In New Mexico, the Conservancy is conducting a statewide analysis to identify places, species, systems and other natural resources at risk due to climate change. The study will also propose measures that land and water managers can take to abate threats to plants, animals and natural processes as the impacts of climate change continue to grow.

Climate Change Research Station – The Conservancy established the Palmyra Research Station with a team of scientists in 2005 to study the effects of climate change on the atoll and surrounding coral reefs. Palmyra’s location in the Pacific Ocean 1,000 miles south of Hawaii makes it an excellent location for scientists to study climate and air-sea interaction, enabling scientists to better project how the world’s coral reefs will respond to changes in climate, human use and conservation management.

Yunnan Province, China – In Yunnan Province, China, native alpine meadows — which provide ecosystem services such as water storage, medicinal plants and grazing for livestock — are being threatened by a rapidly warming climate and local land use policies. The Conservancy is studying potential strategies to protect native alpine grasses, such as changing grazing patterns and fire management techniques.

• Policies to Reduce Emissions and Impacts
The Conservancy works to mobilize governments to enact legislation that addresses the threat of climate change to the lands and waters on which we all depend. The Nature Conservancy is urging political leaders at state, federal, and international levels to: (1) Significantly reduce greenhouse gas emissions from all major emitting countries, industries and sources; (2) Recognize forest and land conservation and restoration as a key strategy in fighting climate change; and (3) Strengthen efforts to reduce impacts on people and nature by
building nature’s resilience to climate change through sound adaptation programs and funding.

− **International Policy Frameworks**
  The Conservancy is working with world leaders to build support for an international climate change agreement that includes all major emitters and sources of emissions, including deforestation. TNC also advocates for funding to implement nature-based adaptation strategies to help buffer the impacts of climate change on people.

− **U.S. Federal Legislation**
  The Conservancy is calling for federal legislation in the United States that establishes significant reductions in emissions through a mandatory limit using market-based mechanisms like cap-and-trade. The Nature Conservancy is a member of the U.S. Climate Action Partnership, a coalition of major corporations and leading environmental organizations urging the federal government to enact legislation requiring significant reductions in greenhouse gas emissions.

− **U.S. State and Regional**
  In the United States, state and regional efforts are catalyzing efforts in Congress to establish federal climate change legislation. The Conservancy is helping development and design of state- and region-wide emission reduction strategies.

(2) **Voluntary Carbon Offset Program**
The Nature Conservancy’s voluntary carbon offset program helps reduce the impacts of climate change and restores critical wildlife habitat. The first project in the program is the *Tensas River Basin Project*. The program will expand to other projects as demand increases. Climate change and forest experts designed and implemented this program which will produce measurable reductions in greenhouse gases and meet or exceed the highest standards available today for voluntary carbon markets. With the rise in awareness and concern about the effects of climate change, voluntary carbon offset programs have begun to proliferate in the United States and around the world. However, because this voluntary market is unregulated, organizations offering offsets hold themselves to varying standards. The Program’s website contains a FAQs page to answer frequently asked questions to address any concerns about The Nature Conservancy’s voluntary carbon offset program.

The Nature Conservancy’s [Voluntary Carbon Offset Program](#) Website

- **The Tensas River Basin Project**
  The Tensas River Basin Project is the first offering in The Nature Conservancy’s voluntary carbon offset program. The Tensas River Basin Project is part of a system of 3,600 acres that are or will soon be under conservation management, creating a large contiguous block of forest within the Lower Mississippi Valley that will restore critical habitat. According to Conservancy climate change experts, a project to capture carbon on 47 acres
of the Tensas River Basin Project is predicted to store 14,300 short tons of carbon dioxide (CO2) in the first 70 years. Revenue from carbon offset contributions will provide the funding to pay the costs not only of setting aside land for the project, but also of planting trees and managing the project. However, to take into account the remote possibility of extreme carbon losses due to severe storms, and other losses beyond our control, we are maintaining a buffer and insurance reserve. It is important to remember that this is the first offering in the carbon offset program. As demand increases for the program we will be expanding within the Lower Mississippi Valley and to new geographies.

The Conservancy has a long history of using conservation easements on private lands, and by extending this approach to a carbon offset model, the Conservancy will invest in protecting land and restoring forests, which will produce real carbon benefits.

The projects in this program are designed to meet, and in some cases exceed, standards set by Voluntary Carbon Standard (VCS), a new but highly touted system for verifying the amount of carbon stored by the projects in the voluntary market. VCS provides a global standard and program for approval of credible voluntary offsets. External experts accredited by VCS will verify carbon storage once every five years. The project has also been designed to meet the project design standards set by the Climate Community and Biodiversity Alliance (CCB), which has one of the highest integrity carbon market standards, by:

- **Mitigating climate change.** The initial project offering is 8,250 short tons of carbon dioxide (CO2) from 47 acres over 70 years, with those newly restored forests being protected for future generations.
- **Increasing regional biodiversity.** By protecting the Tensas River Basin Project, a vital connection will be made between fragmented habitat for the Louisiana Black Bear, as well as other native species. Water quality is also expected to improve, affecting a number of rare and endangered aquatic species.
- **Sustaining livelihoods.** The reforestation of the land will help the State of Louisiana meet Clean Water Act requirements by improving a major tributary of the Tensas River. The project will also contribute to rural economies by employing local planting crews and consulting foresters.

The Conservancy’s Carbon Offset Program helps provide an opportunity to offset your own carbon footprint. By contributing to the protection of additional land to guarantee carbon storage, and by following some of the highest standards of project design and implementation recognized by the carbon market, the Conservancy’s offset program meets high standards of integrity and authenticity.

The Tensas River Basin Project Website

(3) **Forest Carbon Partnership Facility**
The Nature Conservancy has pledged $5 million towards the Forest Carbon Partnership Facility (FCPF), an innovative new initiative launched on December
THE OCEAN CONSERVANCY
The Ocean Conservancy promotes the improvement and conservation of marine life and ocean ecosystems through research, education, and science-based activism. Formerly known as the Center for Marine Conservation.
www.oceanconservancy.org

(1) Position on Global Climate Change
The Ocean Conservancy’s response must include mitigation strategies that substantially reduce greenhouse gas emissions through changes in energy policy and use (e.g., use less energy and find alternatives to fossil fuels), and in land use (e.g., reduce the burning of forests). Other proven methods, such as reforestation, hold the promise of enhancing the absorption of CO2 from the atmosphere. Reducing other stresses on marine ecosystems such as pollution, habitat destruction and overfishing will increase ecosystem resilience, improving the ocean’s ability to resist and recover from the effects of climate change. These responses are required of the developed and developing worlds. Regardless of what we do, we will have to adapt to some degree of change. It is inevitable. Adaptation offers the great hope that we can adjust to and minimize the negative impacts of climate change and use our technological acumen to build a more sustainable society.

THE PEW CHARITABLE TRUSTS
The Pew Charitable Trusts is an independent nonprofit and nongovernmental organization, founded in 1948, providing grants to improve public policy, inform the public, and support community service. The Pew Charitable Trusts is driven by the power of knowledge to solve today’s most challenging problems. Pew applies a rigorous, analytical approach to improve public policy, inform the public and stimulate civic life. Pew considers itself a major force in educating the public and policy makers about the causes, consequences and solutions to environmental problems.
www.pewtrusts.com

(1) Climate Change Campaigns
Pew’s climate change campaigns raise public awareness and build support for policies that reduce global warming pollution and enhance the nation’s energy security. Advocacy campaigns are one of two approaches Pew uses to address climate change.
Pew’s Climate Change Campaigns

(2) Pew Campaign for Fuel Efficiency
The Pew Campaign for Fuel Efficiency seeks more stringent fuel efficiency standards for the nation’s cars and trucks. The campaign is seeking support in Congress for stronger U.S. standards; conducting public education efforts in 15 to

11, 2007 in Bali by the World Bank to address the largest overlooked contributor to climate change — the destruction of forests.
20 key states; and coordinating a coalition of environmental groups at the national level.

http://www.pewfuelefficiency.org/

(3) **Pew Campaign on Global Warming**
The Pew Campaign on Global Warming works to address the issues related to reducing the threat of climate change and is aimed at adoption of a national policy to reduce emissions throughout the economy. The Campaign urges Congress to cap the nation’s global warming pollution and institute complementary policies to: increase fuel efficiency for vehicles, mandate renewable energy, and establish energy efficiency programs.

http://www.pewglobalwarming.org

(4) **Climate Change Policy and Science**
Through research and policy analysis, Pew brings sound science to the policy arena and promotes solutions that will achieve real emissions reductions and improve international climate-change agreements. Science and policy analysis is one of two approaches Pew uses to address climate change.

Pew’s Climate Change Policy and Science

(5) **Pew Center on Global Climate Change**
The Pew Center on Global Climate Change is a non-profit, non-partisan and independent organization dedicated to providing credible information, straight answers and innovative solutions in the effort to address global climate change. The Center provides critical information on global warming and brings together business leaders, policy makers, scientists, and other experts to find solutions to global warming.

http://www.pewclimate.org/

(6) **Federal Climate Change Policy**
Pew works to advance national policies to reduce greenhouse gas emissions in areas such as transportation, power generation, construction and other parts of the economy. Pew’s overarching goal is to move the United States to join with other developed nations in setting mandatory controls on greenhouse gas emissions. Pew’s Federal Climate Change Policy focuses on three primary objectives: (1) securing mandatory federal limits on greenhouse gas emissions; (2) advancing support for complementary reduction policies; and (3) achieving a second round of reduction commitments by developed nations.

(7) **State Climate Change Policy**
In partnership with the Pew Center on Global Climate Change, the Pew Center on the States released issue briefs highlighting the science and impact of climate change, the technological solutions available, the role of business, and the array of diverse international, state and local actions currently underway. Pew invests in research, analysis and strategies to advance innovative policy solutions to address global warming at the state level. According to the Pew Center on the States, of
the three key determinants of *how climate change will affect a state*, two can be influenced by state policy: *energy consumption* and *transportation*. The third factor according to Pew is the state’s physical geography.

http://www.pewcenteronthestates.org/

**Issue Briefs:**

- [Climate Change 101: Adaptation](http://www.pewcenteronthestates.org/Issue Briefs: Climate Change 101: Adaptation) (PDF)
  Adaptation planning at the local, state, and national levels can limit the damage caused by climate change.
- [Climate Change 101: Cap and Trade](http://www.pewcenteronthestates.org/Issue Briefs: Climate Change 101: Cap and Trade) (PDF)
  Report explains how a cap-and-trade program sets a clear limit on greenhouse gas emissions and minimizes the costs of achieving this target.
- [Climate Change: Technological Solutions Report](http://www.pewcenteronthestates.org/Issue Briefs: Climate Change: Technological Solutions Report) (PDF)

(8) **Biofuels for Transportation: A Climate Perspective**

“Biofuels for Transportation: A Climate Perspective” is the latest paper prepared by the Pew Center on Global Climate Change, offering an introduction to the current state of play for biofuels: the technologies used in their production, their GHG emissions, and associated policy issues. (June 2008)


(9) **U.S. Climate Action Partnership (USCAP)**

The Pew Center was one of the inaugural members of the U.S. Climate Action Partnership in January 2007. The U.S. Climate Action Partnership (USCAP) is an expanding alliance of major businesses and leading climate and environmental groups that have come together to call on the federal government to enact legislation requiring significant reductions of greenhouse gas emissions. USCAP has issued a landmark set of principles and recommendations, titled “*A Call for Action*”, to underscore the urgent need for a policy framework on climate change. The report lays out a blueprint for a mandatory economy-wide, market-driven approach to climate protection.


*A Call for Action* (PDF)

(10) **Pew Center’s Coal Initiative**

The Pew Center on Global Climate Change’s Coal Initiative aims to develop approaches for addressing coal that integrate well with solutions for other sectors and energy sources. For example, in developing policies and programs that promote capture and storage (CCS) of carbon dioxide from coal, we will draw on experience that includes enhanced oil recovery and other CCS-related efforts. In addressing policies for addressing the conversion of coal to other forms of energy, we will consider how these fit within broader policy for the power sector, transportation fuels, etc. This initiative is meant to complement prior efforts and ongoing collaborations such as the Massachusetts Institute of Technology’s coal
study, the Western Governors’ Association’s Clean and Diversified Energy Initiative, and the World Resources Institute’s project focused on sequestration. [Pew Climate Coal Project Summary](http://www.pewclimate.org/white_papers/coal_initiative) (PDF)

**THE WILD FOUNDATION**

Created in 1974, The WILD Foundation promotes understanding and protection of wilderness areas and values worldwide, through projects focusing on wilderness, wildlife and people. It directs the World Wilderness Congress and achieves practical conservation results through the *Wilderness Task Force* of the IUCN. [www.wild.org](http://www.wild.org)

1) **Wilderness and Climate Change**

The WILD Foundation works to reduce global-green house gas emissions, halt deforestation and ecosystem degradation, and protect large areas of intact wildlands that play a key role in carbon storage and sequestration. The Foundation’s work in this regard is through on-the-ground projects, education and outreach and international policy.

- [Wilderness and Climate Change Position Statement, April 2008](http://www.wild.org/Comm/Wilderness_Network.htm) (PDF)
- [Wilderness and Climate Change Webpage](http://www.wild.org/Comm/Wilderness_Network.htm)

2) **WILD 9, the 9th World Wilderness Congress**

WILD9, the 9th World Wilderness Congress, to be held in Merida, Mexico in November 2009, will have a special focus on wilderness and climate change. [www.wild9.org](http://www.wild9.org)

3) **The Extreme Ice Survey**

The Extreme Ice Survey, an initiative of conservation photographer James Balog in collaboration with the WILD Foundation, is an innovative project that documents short-term, rapid changes in glaciers, caused by global warming. EIS is the most wide-ranging study of glaciers ever conducted using ground-based, real-time photography. Currently, over twenty-five time-lapse Nikon D200 cameras are strategically positioned to capture glacial change in Greenland, Iceland, Alaska, the Alps and the Rockies providing visual evidence of glacial retreat. These images will be used for a major multi-media outreach campaign to raise awareness of glacial retreat and global warming. [http://www.wild.org/Comm/Extreme_Ice_Survey.htm](http://www.wild.org/Comm/Extreme_Ice_Survey.htm)

4) **Climate Action Partnership – A South African NGO Partnership**

[http://www.wild.org/About/Wilderness_Network.htm](http://www.wild.org/About/Wilderness_Network.htm)

**THE WILDLIFE CONSERVATION SOCIETY**

The Wildlife Conservation Society works to save wildlife and wild places and to promote understanding and respect for nature through conservation, education and science. The WCS uniquely combines the resources of wildlife parks in New York, led by the flagship
Bronx Zoo, with field projects around the globe to inspire care for nature, provide leadership in environmental education, and help sustain our planet's biological diversity.

www.wcs.org

(1) Climate Change
Understanding and mitigating the effects of climate change is one of the Society’s four global wildlife challenges. The Society incorporates climate change analysis at the species and landscape level in all of its field projects and continue to provide an accurate, wide-reaching assessment of this global phenomenon to the scientific community and policymakers. The Society’s work in the Arctic – where the immediate effects of climate change are most apparent – as well as their long-term research on coral reefs have documented the consequences of climate change on these fragile systems.

http://www.wcs.org/globalconservation/challenges/climate

(2) Reducing andOffsetting Carbon Emissions
The Society works closely with governments and corporations to reduce and offset carbon emissions. The Society is currently working to establish “carbon credits” that can essentially be traded on an international market in a number of landscapes. This conservation initiative has been tested at the Society’s long-term project site in Madagascar and promises to be a model for effective and sustainable conservation.

http://www.wcs.org/globalconservation/challenges/climate

(3) Climate Change Initiative
The WCS North America Program is working on-the-ground in several key regions of North America already experiencing rapid climate change, by studying impacts on species and the resulting complex ecological interactions. The focus of the Society’s research is to develop management strategies that lessen the stress of climate change on wildlife, and to redirect conservation planning efforts to protect areas that are more resilient to such changes.

http://www.wcs.org/globalconservation/northamerica/climatechange

Site-based examples:

- Lemmings and Arctic Food Webs: WCS researchers are working to experimentally investigate the role of snow cover in lemming survival and breeding, in addition to documenting the shifting ranges of arctic and red fox, in order to protect this essential predator prey relationship. In addition, WCS researchers in the arctic tundra of western North America are comparing the current timing of reproduction in birds to historic patterns, and establishing a set of permanent plots in diverse vegetation communities to monitor the effects of climate change.

- Woodland Caribou: WCS is mapping the seasonal ranges of woodland caribou herds, determining their selection of habitat based upon current vegetation and climate, and modeling the potential impacts of climate change on key habitats and potential shifts in caribou distribution. This information
will provide the scientific basis for developing proactive conservation strategies that may provide caribou with some resilience to climate change.

- **Greater Yellowstone Wolverine Project**: Initiated in 2001, the Project gathers detailed information on wolverine populations, preferred habitats, and corridors. WCS researchers are attempting to understand the potential impacts of climate change on wolverines and develop strategies for addressing those impacts. [Greater Yellowstone Wolverine Program Webpage](#)

- **Corridor Conservation Initiative**: Conservation planning strategies need to consider how climate change will alter ecosystem processes and cause wildlife and plant distributions to shift across the landscape. WCS’s Corridor Conservation Initiative is working to ensure that protecting connectivity becomes a scientifically sound climate change policy option by encouraging the development of relevant connectivity policy based on rigorous scientific guidelines. The WCS Canada and the Adirondack Program are engaged in ecoregional planning for the northern Appalachian region through the *Two Countries One Forest Project* which identifies critical at-risk linkages under greatest threat from climate change and other pressures.

- **Climate Change and Conservation Planning**: WCS is working to bridge the gap between science and conservation by involving scientists and conservation planners in the development of a framework for incorporating climate change into site-based conservation planning. WCS is advancing this discussion through the creation of a collaborative Climate Change and Conservation Working Group at the National Center for Ecological Analysis and Synthesis (NCEAS), which includes participation from WCS, The Nature Conservancy, Conservation International, the World Wildlife Fund, and several university and government researchers. The working group is charged with: 1) Developing a strategy for how to approach conservation planning under future climate conditions; and 2) Applying that strategy to several regional case studies of wildlife habitat protection in the Intermountain West of North America. This broader NCEAS working group effort will be complemented by regional roundtable discussions such as the May 2007 workshop WCS convened on how climate change may impact conservation priorities in the Greater Yellowstone Ecosystem.

- **Adirondack Case Study of the Consortium for Atlantic Regional Assessment (CARA)**: Working with a team of researchers as part of the Consortium for Atlantic Regional Assessment, the WCS Adirondack program has facilitated a case study examining the impacts of changes in climate on the human and natural communities of the Adirondacks, with a particular focus on the impacts of climate on winter recreation, tourism and water quality. The case study website gives visitors the opportunity to explore historical and projected climate information, learn about likely impacts to the region from climate change, and consider opportunities to mitigate those impacts. [http://www.cara.psu.edu/case_studies/adirondack/](http://www.cara.psu.edu/case_studies/adirondack/)
THE WILDLIFE SOCIETY

Founded in 1937, The Wildlife Society is a scientific and educational organization of professionals and students engaged in wildlife research, management, education and administration. Its mission is to enhance the ability of wildlife professionals to conserve diversity, sustain productivity and ensure responsible use of wildlife resources for the benefit of society.

www.wildlife.org

(1) 2007 Policy Priorities
Issues The Wildlife Society is concentrating on:
   1. Global Climate Change and Wildlife
   2. Energy Development on Federal Lands

TWS 2007 Policy Priorities Webpage

(2) Global Climate Change and Wildlife
The Wildlife Society believes that climate change and its impacts on wildlife must be taken into account in long-term land and wildlife management plans and strategies. In 2004, The Wildlife Society prepared a Technical Review on Global Climate Change and Wildlife in North America. TWS is also actively advocating the inclusion of funding for wildlife and their habitats in any legislation that addresses global climate change. TWS is actively advocating the inclusion of funding for wildlife and their habitats in any legislation that addresses global climate change. If a cap-and-trade system were implemented, for example, the auctioning of carbon emissions credits would generate a new revenue stream, with potentially $500 million to $2 billion a year directed toward wildlife conservation.

TWS Global Climate Change and Wildlife Webpage

TWS Position Statement: Global Climate Change and Wildlife (PDF)
TWS Technical Review: Global Climate Change and Wildlife in North America

(3) Energy Development on Federal Lands
The Wildlife Society is currently developing a position statement on Oil and Gas Development in the Rocky Mountain West, as well as reports on the effects of both wind energy and biofuels production on wildlife. TWS is part of the Fish, Wildlife and Energy Working Group, which has worked to develop the needed data and guidance for industry to explore and extract oil and gas in a manner that does not significantly impact fish, wildlife, and their habitat. The FACTS for Fish and Wildlife campaign calls on the federal government and energy industry to increase funding, accountability, coordination, transparency, and to take science into account when making decisions on whether and how to allow energy development on federal land. As detailed in The Wildlife Society’s Position Statement, there are numerous biological concerns associated with energy development in ANWR, including impacts to species such as the Porcupine caribou herd, muskoxen, denning polar bears, and migrating snow geese. TWS is also concerned about the unknown, long-term, and cumulative effects of
development on ecosystem processes that are vital to the long-term viability and functioning of the arctic ecosystem.

TWS Energy Development on Federal Lands Webpage

TWS Position Statements:
Arctic National Wildlife Refuge (ANWR) (PDF)
Petroleum Development in Arctic, Subarctic, and Coastal Regions (PDF)
Oil and Gas Development in the Rocky Mountain West [In Development]

(4) Technical Review on Wind Energy Impacts on Wildlife
The Wildlife Society published a 50-page report titled the Impacts of Wind Energy Facilities on Wildlife and Wildlife Habitat in October 2007, prepared by a committee of experts, discussing both direct and indirect effects of wind power on wildlife and makes recommendations about addressing these effects to better protect native wildlife and their habitats. The TWS Technical Review summarizes information on the impacts of wind energy facilities on wildlife and wildlife habitat primarily at land-based facilities. The report emphasizes the need to monitor wind energy impacts so that agency managers and biologists, researchers, decision makers, wind industry providers, and other stakeholders are sufficiently informed to help avoid, minimize, and mitigate impacts of wind energy facilities on wildlife and wildlife habitat.


TIBET JUSTICE CENTER
Created in 1989, the Tibet Justice Center uses its legal expertise in the development of materials and resources designed to increase awareness of, and devise solutions to, the environmental crisis affecting the Tibetan Plateau and neighbouring Himalayan regions. http://www.tibetjustice.org

No climate-related activities.

TROPICAL RESOURCES INSTITUTE (YALE SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES)
TRI, the Tropical Resources Institute, is an interdisciplinary, non-degree-granting program located within the Yale School of Forestry and Environmental Studies. TRI supports student research projects aimed at practical solutions to conservation and management of resources in the tropics. www.yale.edu/tri

No climate-related activities.

UNITED NATIONS FOUNDATION
The UN Foundation promotes a more peaceful, prosperous, and just world through the support of the United Nations and its Charter. The UN Foundation builds and
implements public-private partnerships to address the world’s most pressing problems, and broadens support for the UN through advocacy and public outreach.

http://www.unfoundation.org/

(1) **Climate and Energy Initiative**
The UN Foundation Climate and Energy Initiative works to lead the world’s transition toward a climate-friendly energy economy. To address the challenge of global climate change, the United Nations Foundation is working with the United Nations, governments, NGOs, and the private sector to develop and implement sustainable, clean energy solutions.

http://www.unfoundation.org/programs/environment/climate_change.asp

(2) **International Bioenergy Initiative**
The *International Bioenergy Initiative* was launched by the United Nations Foundation (UN Foundation) in 2005. This Initiative integrates in-country resources and international markets to create economic opportunities for rural communities and developing nations. It identifies the nexus of sustainable energy and development - providing innovative, effective strategies to increase rural incomes, improve energy access, and reduce greenhouse gas emissions. Access to clean affordable energy for all is vital to the achievement of the United Nation’s Millennium Development Goals (MDGs) of poverty reduction and sustainable development. The IBI focuses on four priorities: (1) Expanding Energy Access; (2) Promoting New Trade Opportunities; (3) Advocating Cross-Sector Sustainability; and (4) Financing Investment in Biofuels and Energy. The *International Bioenergy Initiative* is part of a broader UN Foundation Climate and Energy Initiative that works to lead the world’s transition toward a climate-friendly energy economy.

http://www.unfoundation.org/bioenergy/index.asp

International Bioenergy Initiative Fact Sheet (PDF)

(3) **UN Biofuels Initiative**
The UN Biofuels Initiative promotes the sustainable production and use of biofuels in developing countries, under conditions that can attract foreign and domestic investment. Biofuels are liquid fuels made from biomass (plants and trees), and include biodiesel for trucks or generators and ethanol for cars or cooking. The Initiative will assess biofuels potential within developing countries and work with national decision-makers and private-sector groups, including NGOs and civil society groups, to develop country-specific strategies for the production and use of biofuels. The Initiative is supported by the UN Foundation and is being undertaken in partnership with five UN agencies working in coordination: Food and Agriculture Organization (FAO), United Nations Conference on Trade and Development (UNCTAD), United Nations Development Program (UNDP), United Nations Environment Program (UNEP), and the United Nations Industrial Development Organization (UNIDO).

The *UN Biofuels Initiative* is part of the broader *International Bioenergy Initiative.*

http://www.unfoundation.org/bioenergy/initiatives.asp
(4) **The Biofuels FAQ**
This guide from the Energy Future Coalition and the United Nations Foundation is intended to lay the facts out clearly, dispel certain commonly held myths, and state the case for biofuels objectively. The guide is divided into two parts: the basic facts about biofuels – how they are made, how much they cost, etc. – and the benefits of large-scale biofuels production and use. This is meant to be a living document, not the last word on biofuels. Contributions, corrections, and updates submitted will continually be added.
http://www.energyfuturecoalition.org/biofuels/
Biofuels for Our Future: A Primer (PDF)

(5) **Realizing the Potential of Energy Efficiency**
Realizing the Potential of Energy Efficiency, a new report published by the UN Foundation looks at ways for the world’s most developed countries – specifically those in the “Group of Eight” (G8) – to reduce energy waste by bolstering energy efficiency. The report urges G8 countries (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States) to double current energy efficiency improvements—reaching a rate of 2.5 percent per year. The UNF report also calls for G8 countries to work alongside developing countries to achieve similar results, and provides options for all countries in planning energy efficiency goals.
http://www.unfoundation.org/energyefficiency/
Executive Summary – Realizing the Potential of Energy Efficiency (PDF)
Full Report – Realizing the Potential of Energy Efficiency (PDF)

(6) **Global Leadership for Climate Action (GLCA)**
The Global Leadership for Climate Action (GLCA) is a task force of world leaders committed to addressing climate change through international negotiations. A joint initiative of the UN Foundation and the Club of Madrid, the GLCA consists of former heads of state and government as well as leaders from business, government and civil society from more than 20 countries. In September 2007 GLCA agreed upon a Framework for a Post-2012 Agreement on Climate Change, which is attached to this document for reference. The Framework was favorably received at the Berlin meeting of the Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development, involving the energy and environment ministers from the 19 major energy-consuming countries and the European Commission.
http://www.globalclimateaction.org/
Framework for a Post-2012 Agreement on Climate Change 2008 Update. (PDF)
A Proposal of the Global Leadership for Climate Action

(7) **Scientific Expert Group on Climate Change and Sustainable Development (SEG)**
The United Nations Department of Economic and Social Affairs (DESA) invited Sigma Xi, the Scientific Research Society, to convene an international panel of scientific experts to prepare a report outlining the best measures for mitigating
and adapting to global warming for submission to the CSD. To carry out this task, the Scientific Expert Group on Climate Change and Sustainable Development (SEG) was formed and is comprised of 18 distinguished international scientists. The panel was asked to consider innovative approaches for mitigating and/or adapting to projected climate changes, and to anticipate the relationship of response measures to sustainable development. The final report, *Confronting Climate Change: Avoiding the Unmanageable and Managing the Unavoidable* was prepared for the 15th Session of the Commission on Sustainable Development. It was a joint initiative by Sigma Xi and the United Nations Foundation.

[www.unfoundation.org/SEG](http://www.unfoundation.org/SEG)

Executive Summary – *Confronting Climate Change* (PDF)
Full Report – *Confronting Climate Change* (PDF)
ERRATA: Replaces page 15 (PDF)

(8) **25x’25 Initiative**
The 25x’25 Initiative—sponsored by the Energy Future Coalition, a project of the UN Foundation—is a new effort to set a national goal for America to produce 25 percent of its energy from renewable sources like solar, wind, and biofuels by 2025. 25x’25 is supported financially by the Energy Future Coalition, a non-partisan public policy initiative funded by foundations. The *25x’25 Action Plan: Charting America's Energy Future* provides that policy framework and serves as a map for the public and policy makers to use in setting a new course for America. The Action Plan outlines specific steps needed to put our nation on the path to achieve the 25x’25 goal: By the year 2025, America’s farms, ranches and forests will provide 25 percent of the total energy consumed in the United States, while continuing to produce safe, abundant and affordable food, feed and fiber. Specifically, the Action Plan calls for supportive policies in each of five areas: (1) Increasing production of renewable energy; (2) Delivering renewable energy to markets; (3) Expanding renewable energy markets; (4) Improving energy efficiency and productivity; and (5) Strengthening conservation of natural resources and the environment.

*25x'25 Action Plan: Charting America's Energy Future* (PDF)

(9) **Investor Network on Climate Risk (INCR)**
The Investor Network on Climate Risk (INCR) is a network of institutional investors and financial institutions that promotes better understanding of the financial risks and investment opportunities posed by climate change. INCR leverages the collective power of these investors to promote improved disclosure and corporate governance practices on the business risks and opportunities posed by climate change.
To consider the scale and urgency of the climate challenge and how investors can advance solutions, Ceres, the United Nations Foundation, and the UN Fund for International Partnerships co-hosted the third Investor Summit on Climate Risk at the United Nations on February 14, 2008. The **2008 Investor Summit on Climate Risk** brought together more than 450 institutional investors, Wall Street leaders and CEOs from around the world, representing over $22 trillion in assets, to consider the scale and urgency of climate change risks, as well as the economic opportunities of a global transition to a clean energy future.  

[www.incr.org](http://www.incr.org)

**UN Foundation Initiatives (Program Areas: Energy & Environment)**

**The UN Foundation’s work with Institutional Investors on Climate Risk**

2008 Investor Summit on Climate Risk [Website](http://www.incr.org)

2008 Investor Summit on Climate Risk [Final Report (PDF)](http://www.incr.org)

(10) **Building a Clean Energy Future – The Role of Students and University Endowments**

The United Nations Foundation, Ceres and the Sustainable Endowments Institute invited student, non-profit and foundation leaders to a conference titled “Building a Clean Energy Future – The Role of Students and University Endowments” in March 2006 to discuss ways to promote clean energy and improve university endowment practices related to climate change. Outcomes of the conference included the formation of a steering committee and the adoption of draft Principles for Endowment Climate Action.

[UN Foundation Initiatives (Program Areas: Energy & Environment)](http://www.incr.org)

**Building a Clean Energy Future – The Role of Students and University Endowments** [Conference Report (PDF)](http://www.incr.org)

(11) **UN Foundation Programs**

The UN Foundation “Leverages Support for Innovation” by building partnerships around innovative programs that might not otherwise secure government attention and support. The UN Foundation’s investments in these innovative programs develop models for sustainable energy development that feature strong potential for replication and scale-up, demonstrate the successful application of these models, and catalyze additional investment from the private sector, including from donor institutions such as the World Bank and the GEF.

*Examples Include:*

- UNF and the Shell Foundation have invested with the UN Environment Programme in a large-scale initiative to accelerate the market for financing solar power in India by helping two of India’s largest commercial banks develop lending portfolios specifically targeted at solar home systems.

- At World Summit on Sustainable Development (WSSD), UNF initiated a partnership with the e7 (the largest electric utilities in the G7 countries), the UN Development Programme, and American Electric Power to bring wind power to the Galápagos — a fragile and treasured island area.
UNF and the UN Environment Program have also invested in the *Renewable Energy Enterprise Development Initiative* which helps local entrepreneurs create clean energy enterprises in Brazil, China and five African countries for the rural and peri-urban poor. This successful enterprise-centered energy development model is now being scaled up by other large donors such as the World Bank, the Global Environment Facility, the Swedish International Development Agency, the German Ministry of Economic Cooperation and Development, and the German development bank KfW.

**WILDLIFE ALLIANCE**

Wildlife Alliance's mission is to protect and preserve wildlife, forests and oceans for future generations. The organization’s field operations, formerly carried out under the name WildAid, train and equip park rangers to fight crimes against nature, prevent poaching and illegal habitat destruction in Southeast Asia, Latin America, Russia and the Western Pacific through collaboration with governments and communities. The organization works to improve the management of protected areas, support sustainable development initiatives, and empower countries to enforce transboundary wildlife regulations.

[www.wildlifealliance.org](http://www.wildlifealliance.org)

*No climate-related activities.*

**WILDLIFE MANAGEMENT INSTITUTE**

Founded in 1911, the Wildlife Management Institute (WMI) is a private, nonprofit, scientific and educational organization, dedicated to the conservation, enhancement and professional management of North America's wildlife and other natural resources.

[www.wildlifemanagementinstitute.org](http://www.wildlifemanagementinstitute.org)

*No climate-related activities.*

**WORLD RESOURCES INSTITUTE**

The World Resources Institute is an independent center for policy research and technical assistance on global environmental and development issues. WRI’s mission is to move human society to live in ways that protect Earth’s environment and its capacity to provide for the needs and aspirations of current and future generations.


1. **Climate, Energy & Transport**

WRI’s goal is to protect the global climate system from further harm due to emissions of greenhouse gases and help humanity and the natural world adapt to unavoidable climate change. By conducting independent research and developing innovative policy and business options, WRI is promoting an effective international and US response to climate change. In particular, WRI aims to: (1) Develop robust international agreements and US policies to protect the climate system; (2) Foster widespread investment in climate-friendly energy and transportation technologies; and (3) Reduce greenhouse gas emissions through...
clean alternatives supported by businesses, governments, nongovernmental organizations, and the public.
http://www.wri.org/climate

(2) **International Action**
WRI works with governments, corporations, and nongovernmental organizations around the world to find ways to limit greenhouse gas emissions and improve adaptive capacity in both developed and developing countries.

- **Sustainable Development Policies and Measures (SDPAMs)**
  WRI's SDPAMs initiative aims to find ways to help major developing countries find policies and measures that meet their own sustainable development goals more effectively, while creating significant benefits for the global climate. WRI is looking at the potential for such SDPAMs in four countries: India, Brazil, China, and South Africa. WRI is also starting a comprehensive database of such "climate-relevant" SDPAMs in major developing countries, soon to be available online.
  http://www.wri.org/project/sd-pams
  SD-PAMs Case Study Database

- **GHG Protocol Initiative**
The Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. The GHG Protocol Initiative, a decade-long partnership between the World Resources Institute and the World Business Council for Sustainable Development, is working with businesses, governments, and environmental groups around the world to build a new generation of credible and effective emissions accounting and reduction programs for tackling climate change.
The GHG Protocol consists of two modules:
  i. Corporate Accounting and Reporting Standards: methodologies for business and other organizations to inventory and report all of the GHG emissions they produce.
  ii. Project Accounting Protocol and Guidelines: geared toward calculating reductions in GHG emissions from specific GHG-reduction projects. The Project Protocol is the most comprehensive, policy-neutral accounting tool for quantifying the greenhouse gas benefits of climate change mitigation projects.
To date, the GHG Protocol has established a successful partnership with stakeholders in China, Mexico, the Philippines, Brazil, South Korea, and India.
For additional information on the GHG Protocol and associated GHG Programs, please see http://www.ghgprotocol.org/.

- **EMBARQ: The WRI Center for Sustainable Transport**
The EMBARQ global network catalyzes environmentally and financially sustainable transport solutions to improve quality of life in cities.
WRI believes that finding socially, financially, and environmentally sound solutions to the problems of urban mobility in developing cities is vital to global sustainability. EMBARQ, the WRI Center for Sustainable Transport, is leading the way by pioneering the use of carefully structured public-private partnerships in Istanbul, Mexico City, Porto Alegre, Shanghai, and Hanoi to help them reduce the risks and costs of making their transportation systems more sustainable and to expand activities to other cities within the country or region to leverage the capacity and learning created through initial city partnerships.

http://embarq.wri.org/

- **Vulnerability and Adaptation Project**
  WRI’s Vulnerability and Adaptation (V&A) project tackles questions of how policy design can respond to the range of challenges raised by climate vulnerability. Working with partners in key developing countries, WRI will:
  1. Identify national policy elements that implement adaptive measures in infrastructural investments and development decisions;
  2. Prevent the “maladaptation” potentially associated with the uncoordinated or contradictory action in different sectors or government agencies; and
  3. Provide local communities with the information and resources they need to take effective action to protect their livelihoods and ecosystems from the effects of climate change.

  Vulnerability & Adaptation Case Study Database

(3) **U.S. Action**
WRI works with US leaders at all levels to develop policies that will significantly reduce US greenhouse gas emissions. WRI also works with major US companies to develop technologies and growth strategies for a carbon-constrained world.

- **Emissions Markets Project**
  This project facilitates the development of globally consistent markets for greenhouse gas emission reductions, which will form a critical component of both U.S. policies and international agreements on climate change. The initial focus of the Emissions Markets project is on domestic programs, which may ultimately form the basis for a national GHG market. WRI is engaged with several domestic emissions trading programs that are currently underway or under development. WRI participates in international policy discussions related to emissions trading, and closely tracks developments under the Kyoto Protocol and European Union Emissions Trading System, for example, to ensure that lessons are widely shared and that emissions markets around the world develop consistently.

  http://www.wri.org/project/emissions-markets

- **US Climate Business Group**
  The U.S. Climate Business Group builds strategies for companies to thrive in a carbon-constrained economy. Partners develop greenhouse gas (GHG) management systems, share energy management practices and invest in clean energy. These corporate actions shape multi-sectoral policy approaches for a
safe climate, sound business future in the The U.S. Climate Business Group is one example of WRI’s collaboration with the private sector to address the challenge of climate change.
http://www.wri.org/project/us-climate-business

• **Green Power Market Development Group (GPMDG)**
The GPMDG is a unique commercial and industrial partnership dedicated to building corporate markets for green power. The Group is advancing a clean energy future by developing 1,000 megawatts of cost-competitive green power by 2010.
The Group is pursuing three types of green power opportunities:
  1. **Green Electricity** – Electricity from renewable resources including wind, solar (photovoltaic), geothermal, biomass, landfill gas, and certified low-impact hydro.
  2. **Green thermal energy** – Heat from renewable resources including solar thermal systems and direct use of landfill gas.
  3. “**Clean” energy technologies** – Electricity and/or heat from fuel cells.
The Group leverages its purchasing power to stimulate the development of cost-competitive renewable energy resources. By developing the business case for clean energy and creating replicable purchasing strategies, the Group seeks to build robust corporate markets for green power.
http://www.thegreenpowergroup.org/

• **Carbon Capture and Sequestration (CCS)**
The WRI CCS Project is a stakeholder partnership between businesses, governments, NGOs, and other interested parties designed to build consensus on CCS project guidelines that ensure public confidence in these practices. The Project’s initial work is focused primarily on the deployment of a domestic framework for CCS regulation in the United States, but follow-on work in key developing countries is also expected.
WRI is also developing a series of issue papers to address specific CCS topics, such as public acceptability, long-term liability, greenhouse gas accounting, and the use of public lands.
http://www.wri.org/project/carbon-capture-sequestration

(4) **Sustainable Business and Markets**
WRI works with key members of the US and international business community to find ways to protect the climate system while protecting the bottom line.

• **Capital Markets Research**
WRI is collaborating with the investment community to quantify the financial implications of environmental risks and opportunities and calling for greater disclosure of environmental risks and data by companies and regulators.
http://capitalmarkets.wri.org/
(5) **Climate Analysis Indicators Tool (CAIT)**
WRI’s CAIT project provides comprehensive and comparable databases of greenhouse gas inventories and other climate-relevant data, analysis tools, and dynamic maps.
http://cait.wri.org/

(6) **The Climate Registry**
WRI facilitated the creation of The Climate Registry, a multi-state and tribe collaboration aimed at developing and managing a common greenhouse gas emissions reporting system. The Climate Registry is a nonprofit partnership developing an accurate, complete, consistent and transparent greenhouse gas emissions measurement protocol that is capable of supporting voluntary and mandatory greenhouse gas emission reporting policies for its Members and Reporters. It will provide a verified set of greenhouse gas emissions data from its Reporters supported by a robust accounting and verification infrastructure. Currently, 34 U.S. states, representing over 70 percent of the U.S. population, in addition to two Canadian provinces and 1 tribe have joined. With the publication of the *General Reporting Protocol* (GRP), the Registry is on schedule to be fully operational this summer. The Registry’s General Reporting Protocol (GRP) describes the reporting requirements for the Registry’s voluntary GHG reporting program including: policy guidelines; technical guidelines; quantification methodologies; and administrative deadlines.
http://www.theclimateregistry.org/

**WORLD WILDLIFE FUND – US**
Established in 1961, the World Wildlife Fund-US is the largest private US organization working worldwide to protect endangered wildlife and wildlands.
http://www.worldwildlife.org

(1) **WWF Climate Program**
The WWF climate program is a team of dedicated experts working worldwide to examine the effects of climate change and develop, implement and advocate for solutions that protect people, places and wildlife. To date, WWF has led a variety of adaptation and resilience projects around the world, published a leading text on climate change adaptation, *Buying Time: A Users Manual to Building Resistance and Resilience to Climate Change in Natural Systems* and created a climate adaptation training program called *Climate Camp*, in which staff from NGOs and governments come together to share ideas and information for developing new approaches to climate change.
Through four key initiatives WWF is moving individuals, businesses, and leaders -- local, national and international -- towards responsible energy and environmental choices while enhancing the ability of ecosystems to resist and recover from the environmental stresses of climate change and increasing protection of forests.
http://www.worldwildlife.org/climate/
• **Shaping policy through science**: WWF is working with the U.S. government to build support for a new post-2012 global climate agreement that would shape the international regulatory framework and set standards for emerging global carbon markets.

• **Reducing carbon through forest programs**: WWF is building stronger conservation programs that will end deforestation and provide more financial incentives for developing countries to conserve their forests.

• **Developing and implementing adaptation plans for high risk ecosystems**: To protect ecosystems and their natural resources, WWF works with communities worldwide to prepare for the short- and long-term impacts of climate change.

• **Helping corporations reduce carbon emissions**: Leading corporations are partnering with WWF to establish ambitious targets to voluntarily reduce their greenhouse gas emissions.

(2) **REDD**
WWF believes it is necessary for the second phase of the Kyoto Protocol to include mechanisms that recognize and provide incentives for reducing emissions from deforestation (REDD), while ensuring that REDD-related emissions are truly additional to industrial emission reductions. WWF is supporting REDD activities in developing countries, including capacity building. WWF is also developing high standards for REDD initiatives to ensure that they are sound and well-implemented, benefit local livelihoods, and respect the rights of indigenous people and other local communities. WWF has also initiated pilot projects in key regions of the world to better understand the impacts of climate change on ecosystems and test methods for managing forests to resist these impacts.

http://www.worldwildlife.org/what/globalmarkets/forests/item3577.html

(3) **WWF Climate Change Adaptation/Resilience Building Projects**
WWF is developing and implementing resistance projects with local communities; national, regional and local government agencies; WWF national organizations; and other local conservation and research groups.

http://www.worldwildlife.org/climate/adaptationprograms.html

For project descriptions and more information about WWF’s Climate Change Adaptation/Resilience Building Projects, please refer to PDF file.

WWF Climate Change Adaptation/Resilience Building Projects (PDF)

(4) **Climate Savers**
Leading corporations are partnering with WWF to establish ambitious targets to voluntarily reduce their greenhouse gas emissions. By 2010, WWF Climate Savers companies will reduce their carbon dioxide pollution by over ten million metric tons each year, the equivalent of taking 2 million cars off the road. By increasing efficiency, Climate Savers companies are saving hundreds of millions
of dollars, proving again that protecting the environment makes good business sense.
http://www.worldwildlife.org/climate/item3799.html

(5) Buying Time: A Users Manual to Building Resistance and Resilience to Climate Change in Natural Systems
In this text, WWF assesses the damage to forests being caused by climate change and explore ways to prevent future harm.
Buying Time: A Users Manual to Building Resistance and Resilience to Climate Change in Natural Systems (PDF)

(6) Climate Camp
Climate Camp is a five day program to help conservation practitioners, resource managers and others grappling with what to do about climate change develop a plan. Over the five days, Climate Campers will learn climate change basics, interact with experts and peers to develop project plans, and in the end share projects and develop resource networks to support their work forward in this field.
http://www.worldwildlife.org/climate/climatecamp.html
Defending Nature Against Climate Change (PDF)
Adapting Conservation in WWF’s Priority Ecoregions

WORLDWATCH INSTITUTE
The WorldWatch Institute is an independent research organization that works for an environmentally sustainable and socially just society, in which the needs of all people are met without threatening the health of the natural environment or the well-being of future generations.
http://www.worldwatch.org

(1) Energy and Climate Change Program
Worldwatch Institute's Energy and Climate Change Program is dedicated to achieving a substantial reduction in the combustion of fossil fuels and a transformation of the global energy system in order to stabilize the climate and increase energy security. Worldwatch's Energy and Climate Change Program aims to accelerate the transition to a low-carbon energy system based on sustainable use of renewable sources of energy, including wind, solar, geothermal, and biomass, together with major improvements in energy efficiency. The Institute will develop and communicate a strategy for achieving a tipping point at which renewables are less expensive than fossil energy-allowing economic momentum to accelerate the transition.
http://www.worldwatch.org/programs/energy_climate

Achieving the needed energy transformation will require:

- Profound changes in government policies;
- Strengthened global governance in the form of a new international climate agreement; and
• Mobilization of the private sector to develop and deploy a host of new technologies.

Worldwatch's energy and climate program is aimed at all three of these decision-maker audiences, with a particular focus on Brazil, China, Europe, India, and the United States, which together account for 60 percent of global greenhouse gas emissions.

The Institute's second major focus is to work with developing countries to increase their capacity to respond to the challenges presented by climate change and to pursue a more viable energy development path.

(2) Sustainable Agriculture Program
Worldwatch Institute's Sustainable Agriculture Program is building the political will to address the dangerous interplay between environmental threats and global hunger. This challenge is driven by shortages of land and water, short-sighted farming techniques, rising energy prices, and climate change. Worldwatch's goal is a sustainable agricultural system that meets global food needs and protects the natural resource base while reducing rural poverty.

Worldwatch's Sustainable Agriculture Program stresses the benefits to farmers, consumers, and ecosystems that will flow from food systems that are flexible enough to deal with a shifting climate, productive enough to meet the needs of expanding populations, and accessible enough to support diverse and equitable rural communities.

A major focus of the Institute over the next few years will be creating a roadmap for farmers, agribusiness, and other agricultural decision makers to guide them in this evolution. Target audiences include government policymakers, international development agencies, and private agricultural funders.

http://www.worldwatch.org/programs/agriculture

ZOOCATOLOGICAL SOCIETY OF SAN DIEGO
Founded in 1916, the Zoological Society of San Diego is a conservation, education, and recreation organization dedicated to the reproduction, protection, and exhibition of animals, plants, and their habitats. The Society is particularly concerned with captive breeding of endangered species and the education of the public in the conservation and protection of animals. The Society publishes its research findings to enhance captive reproduction efforts.

www.sandiegozoo.org

(1) Climate Change: Endangered Wildlife and Habitats
Official Position Statement: As stewards dedicated to the conservation of wildlife around the world, the Zoological Society of San Diego recognizes the substantial and persuasive data on global climate change and its ramifications for endangered wildlife and habitats. Because there are clear and viable alternatives to help curb the emission of greenhouse gases, the Society commits its cooperation and resources to the following action steps: (1) Expanding efforts to implement more sustainable alternatives within the organization; (2) Educating others to reduce...
their carbon footprint; (3) Endorsing local, national, and international agreements to curb production of greenhouse gases; and (4) Conducting and participating in conservation projects that address the effects of global climate change.
INTERNATIONAL NGO

ANTARCTIC AND SOUTHERN OCEAN COALITION
The Antarctic and Southern Ocean Coalition (ASOC) is a global coalition of environmental Non-Governmental Organizations with more than 100 environmental organizations around the world. ASOC has worked since 1978 to ensure that the Antarctic Continent, its surrounding islands and the great Southern Ocean survive as the world’s last unspoiled wilderness, a global commons for the heritage of future generations. ASOC is the environmental observer to the Antarctica Treaty System. www.asoc.org

(1) Issues: The Antarctic and Climate Change
Researchers from the Antarctic and Southern Ocean Coalition (ASOC) have produced numerous papers related to Climate Change and Antarctic for submission to a variety of Antarctic protection authorities including the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Antarctic Treaty Consultative Meeting (ATCM). Realistic predictions of the response of Antarctica to enhanced greenhouse warming and the resulting sea-level contribution will not be possible until the present mass balance is determined and a better understanding of the atmosphere–ice–ocean processes and ice dynamics is developed. ASOC Climate Change Issues Webpage

Climate Change and the Implementation of CCAMLR's Objectives Paper from CCAMLR 2007 (PDF)
The Antarctic and Climate Change Paper from ATCM 2007 (PDF)
The Antarctic and Climate Change Paper from ATCM 2006 (PDF)
The Antarctic and Climate Change Paper from ATCM 2005 (PDF)

CONSERVATION INTERNATIONAL
Founded in 1987, Conservation International encourages and supports charitable, scientific and educational programmes and objectives. Its purpose is to conserve the ecosystems and biological diversity that support life on earth with special emphasis on local capacity building and empowerment. Conservation International’s mission is to conserve the Earth’s living natural heritage, our global biodiversity, and to demonstrate that human societies are able to live harmoniously with nature. www.conservation.org

(1) Climate Change Strategy
CI is tackling climate change by conserving nature.

In response to climate change, CI is mobilizing a broad coalition of governments, businesses, international agencies, local communities, and many others to develop and implement a science-based strategy that utilizes both man-made technology
and nature’s technology – the species and ecosystems that make up our planet’s biodiversity and are vital to our existence.

CI is bringing its experience to the urgent issue of climate adaptation. CI’s efforts to minimize climate change must include helping species and human communities cope with its impacts.

Over the next three years CI will:

a. Conduct research to identify the ecosystems most at risk from climate change and develop a strong response to help vulnerable people and species.

b. Test our research and demonstrate effective strategies on the ground in the more than 40 countries in which we work. CI’s conservation programs will help countries take a leadership role in harnessing their country’s natural resources to tackle climate change.

c. Influence international and national policies to place biodiversity protection and restoration at the center of global strategies for mitigating and adapting to climate change. We will assist indigenous peoples and local communities in making their voices heard, and in influencing policy decisions.

d. Shape market-based solutions that will protect forests and reduce emissions. This effort includes creatively investing public and private funding, and influencing the standards for markets trading the financial benefits that intact forest can provide.

Results: By protecting forests in the biodiversity hotspots and high-biodiversity wilderness areas in which they work, CI and its partners can reduce greenhouse gas emissions by 1 to 2 billion tons per year. This represents 3 to 5 percent of the entire global reduction in emissions needed by 2030.

http://www.conservation.org/learn/climate/

Harnessing Nature as a Solution to Climate Change (PDF)
CI’s full climate change business plan

(2) CI Carbon Projects: Saving Forests
Below are CI’s Forest Carbon Projects already underway. Nine more are just getting started in the Philippines, Peru, Brazil, Guatemala, Mexico, Liberia, Indonesia, and Colombia.

- Makira Forest Project, Madagascar
  CI is working with the government of Madagascar and the Wildlife Conservation Society (WCS) in Madagascar’s northeastern forests to reduce deforestation across the 4,600-square-kilometer region.

- Mantadia Corridor Project, Madagascar
  In close partnership with the government of Madagascar and local communities, CI designed and implemented a second Forest Carbon Project in Madagascar. In the Mantadia Corridor Project, more than 425,000 hectares of standing rain forests are being protected, while another 5,000 hectares of
previously degraded land are being reforested with native species and fruit gardens.

- **Tengchong Forest Project, China**
  In Yunnan Province, CI is working alongside the Yunnan Forestry Department and The Nature Conservancy on the first small-scale forestry project to meet strict Kyoto Protocol requirements for curbing climate change. The project will restore 467 hectares of mixed-use native forests and sequester an estimated 167,000 tons of CO2 over its 30-year life.

- **Chocó-Manabi Corridor Project, Ecuador**
  A group of partners, including CI and the Maquipucuna Foundation, created the project known as ChoCO2 to reforest at least 265 hectares of degraded pasture land in the western foothills of Ecuador. Together, the group will plant a mixture of 15 native tree species on former ranch lands, reconnecting existing forests to facilitate species migration as local climate conditions change.

(3) **CI Carbon Projects: Protecting Oceans**
CI is working with communities, governments, and partner organizations around the world, including:
- Raja Ampat, Indonesia
- Colombia’s Seaflower Reserve
- Galapagos Islands, Ecuador
- Asia’s Sulu-Sulawesi Seascape
- **Madagascar:** CI is helping conduct a widespread assessment of Madagascar to determine how vulnerable the country’s land and water truly are in the face of climate change. The results of the assessment, slated for release in June 2008, will inform future conservation initiatives.

(4) **Future CI Forest Carbon Projects**
Protecting and restoring forests then is an essential first response to climate change. Several CI forest carbon projects already under way. Nine more are just getting started in the Philippines, Peru, Brazil, Guatemala, Mexico, Liberia, Indonesia, and Colombia. [http://www.conservation.org/learn/forests/Pages/projects.aspx](http://www.conservation.org/learn/forests/Pages/projects.aspx)

Future CI Forest Carbon Projects include:
- **Sierra Madre, Philippines**
  On the Philippine island of Luzon, the 1.4 million hectare Sierra Madre Biological Corridor accounts for more than 40 percent of the country’s remaining old-growth forest. This project has been designed to provide multiple benefits including carbon sequestration, water and soil conservation, and income-generation for local communities

- **Alto Mayo Forest, Peru**
  The Alto Mayo River, flowing through the province of San Martin in northern Peru, passes through Andean forest areas of high biological diversity on its way to the Amazon basin. Within the upper elevation areas of the watershed, the Alto Mayo Protected Forest contains habitat for many endemic species that are under threat from illegal land-clearing. The project will reduce deforestation by negotiating conservation agreements with local inhabitants who
are encroaching on intact forests, planting native species on deforested areas, and designing agroforestry systems to expand tree cover and carbon stocks throughout the watershed.

− **Northeastern Atlantic Forest, Brazil**
  The Paraiba state of northeastern Brazil’s Atlantic Forest, known for its biological diversity, has been under cultivation since the seventeenth century for sugar cane and other crops – and only 4.6 percent of the original forest cover remains, mostly in small pockets surrounded by agriculture. An alliance of sugarcane producers, local and international nongovernmental organizations, research organizations, and government agencies has identified a unique opportunity to reforest at least 1,800 hectares of private lands currently devoted to the industrial cultivation of sugar cane. By restoring forests on lands between existing forest remnants, the project will create habitat connectivity for wildlife, including many endemic plant and animal species.

− **The Maya Biosphere Reserve Conservation Carbon Project, Guatemala**
  The Maya Biosphere Reserve is the epicenter of the ancient Maya civilization, and also Central America’s largest protected area, covering roughly 2.1 million hectares. Despite having legal protection, the reserve is under increasing threat from agricultural encroachment and illegal logging that reduces forest cover, increases fragmentation, and diminishes the biological diversity of the park. In response, CI and its partners are designing a project that reduces deforestation rates and improves the management of the Reserve. Through the sale of carbon offsets, the project seeks to mitigate management problems in the national park units caused by a lack of financial resources.

− **La Cojolita Selva Lacandona Carbon Project, Mexico**
  Covering approximately 1.8 million hectares, the Selva de Lacandona is a region of rich biological diversity and home to several indigenous peoples in Mexico. Selva de Lacandona also has important populations of tapir, peccary, jaguar, and spider and howler monkeys. The diverse forests are under pressure from illegal land incursions for agriculture, unsustainable cattle ranching, and unauthorized logging. Local conservation and community organizations, in partnership with CI, will implement an integrated project to reduce carbon dioxide emissions from deforestation and sequester additional carbon on degraded agricultural areas.

− **Liberia’s Network of Protected Areas**
  Liberia contains 4.5 million hectares of lowland tropical forest, half of all remaining forest within the Upper Guinea forests of West Africa. These forests are immensely important for their biological diversity, containing the last long-term viable populations of several threatened endemic species. These forests also provide important ecosystem services and hold the potential to help reduce high levels of poverty in the country. The government of Liberia has been working to design its national forest strategy, known as the “3C” approach, to include areas zoned for community, conservation, and commercial uses.

− **Muriqui Habitat Corridor Forest Carbon Project, Brazil**
  The Ipanema/Caratinga/Sossego (“Muriqui”) Biodiversity Corridor is an extremely threatened region in the Atlantic forest of Brazil that harbors two of the most important sanctuaries for the northern muriqui (Brachyteles hypoxanthus), the largest primate in the Americas. To prevent the loss of the northern muriqui and other endemic animal species, forest corridors and protected areas linking the remaining fragments are needed to facilitate animal movement.

− **Mamberamo Basin, Indonesia**
  The Mamberamo Basin is an 8-million-hectare watershed of lower montane, lowland, and swamp forests in Papua, Indonesia, with high biodiversity conservation value. Increasing pressure to convert the existing forests to palm oil plantations is a major threat to the region, with a 600,000-hectare area currently slated for agricultural and forestry development. The Mamberamo Basin project seeks to protect the region’s forests and to use carbon financing to ensure their long-term conservation.
- **Bogotá Conservation Corridor, Colombia**
  There are three protected areas surrounding the Colombian capital of Bogotá – Sumapaz National Park, Chingaza National Park, and a National Forest Reserve. These protected areas are crucial for the city’s water supply, and are important reservoirs of native biological diversity in the Andean forests and paramó ecosystems that constitute a critical link within the North Andean Conservation Corridor. Protecting this important watershed from agricultural encroachment is crucial to ensure both the long-term supply of Bogotá’s water and the rich biological diversity of the area. Over its 30-year life, the project will sequester carbon by planting and maintaining native trees on more than 15,000 hectares of previously deforested agricultural areas.

**COUNTERPART INTERNATIONAL, INC.**
Counterpart International is a nonprofit organization, founded in 1965, dedicated to building a just world through service and partnership. The organization offers options and access to tools for sustained social, economic and environmental development and forges strategic partnerships in the public and private sector.  
[www.counterpart.org](http://www.counterpart.org)

(1) **Global Sustainable Energy Islands Initiative (GSEII)**
In October 1998 the Climate Institute and Counterpart International organized a Symposium on Sustainable Energy Options for Small Island States. Seeking to expand the Sustainable Energy Demonstration Country concept to other island nations, the Climate Institute and four partners — Counterpart International, Winrock International, Forum for Energy and Development and the Organization of American States — formed a consortium to support the interest of all small island states and potential donors by bringing renewable energy and energy efficiency projects, models, and concepts together in a sustainable plan for small island nations. The Global Sustainable Energy Islands Initiative (GSEII), a consortium of international NGOs and multi-lateral institutions, has been organized to support the members of the Alliance of Small Island States (AOSIS), potential private investors and donors by bringing renewable energy and energy efficiency projects, models, and concepts together in sustainable energy plans for small island nations. The GSEII seeks to showcase national efforts to significantly reduce greenhouse gas emissions.  

**ECOAGRICULTURE PARTNERS**
Ecoagriculture Partners strives for a world where current agricultural lands are increasingly managed as ecoagriculture landscapes to achieve three complementary goals: to enhance rural livelihoods; conserve biodiversity; and sustainably produce crops, livestock, fish, and forest products. The organization helps to scale up successful ecoagriculture approaches by catalyzing strategic connections, dialogue, and joint action among key actors at local, national, and international levels.  
[www.ecoagriculturepartners.org](http://www.ecoagriculturepartners.org)
This conference will explore the following four questions, under a framework of two basic inquiries – what do we know, and what can we do? Participants will explore:

− How does Global Warming and Climate Change impact our environment and our community?
− What common sense approaches do we need to adopt to effect real change?
− What are simple and low cost ways that will help us save energy?
− What will it take to build a green community?

The objective for the meeting in Indonesia is to have an exchange of views on how climate change mitigation and adaptation efforts may intersect with the trade of food and agricultural products and on the policy issues that arise from this intersection. Indonesia is an appropriate setting for this discussion, given that sustainability in agriculture, impacts from climate change, and food versus fuel competition are, unfortunately, already pressing issues.

**FOREST TRENDS**

Forest Trends is an international non-profit organization that works to expand the value of forests to society; to promote sustainable forest management and conservation by creating and capturing market values for ecosystem services; to support innovative projects and companies that are developing these new markets; and to enhance the livelihoods of local communities living in and around those forests. Forest Trends works to maintain and restore forest ecosystems by promoting incentives that diversify trade in the forest sector, moving beyond exclusive focus on lumber and fiber, to a broad range of products and services.

[www.forest-trends.org](http://www.forest-trends.org)

**Business and Biodiversity Offset Program (BBOP)**

Forest Trends, in conjunction with Conservation International and the Wildlife Conservation Society, is administering a program to explore biodiversity offsets.


**Forest Climate Alliance**

The Forest Climate Alliance promotes climate policies and strategies that integrate goals of the UN Framework Convention on Climate Change with the Convention to Combat Desertification, the Convention on Biological Diversity, and the Millennium Development Goals. Forest Trends and the Katoomba Group
are developing policy briefs and targeted materials for Alliance members to use in advocating at international meetings and in national planning processes. Coming soon from Forest Trends and The Katoomba Group – Clean development mechanism forestry for poverty reduction and biodiversity conservation: making the CDM work for rural communities.

http://www.forest-trends.org/programs/services.htm

INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES
Created in 1902, the Association of Fish and Wildlife agencies has been a key organization in promoting sound resources management and strengthening federal, state and private cooperation in protecting and managing fish and wildlife and their habitats in the public interest.

http://www.iafwa.org/

(1) Changing Climate of Wildlife Management
"Changing Climate of Wildlife Management" – A special General Session of the 2007 Annual Meeting of the Association of Fish and Wildlife Agencies
State fish and wildlife agencies are responsible for the management of the fish and wildlife in our nation and have a critical interest in the potential impacts associated with climate change. Since climate change will either impact or have the potential to impact the wildlife resources for which they are responsible, state resource management agencies, tribes, and the federal agencies will all be challenged to manage populations and ecosystems in the face of these changes and uncertainties about how ecological systems will adapt.

The 2007 general session highlighted approaches and strategies that state fish and wildlife agencies are taking to address potential impacts and challenges associated with climate change on a variety of natural resource issues. The general session was sponsored by the Association of Fish and Wildlife Agencies, the U.S. National Park Service, U.S. Geological Survey, and U.S. Fish and Wildlife Service.

http://www.fishwildlife.org/agency_science_climate.html

INTERNATIONAL INDIAN TREATY COUNCIL
Founded in 1974 by a group of Indian elders and activists concerned about the critical situation threatening their people and lands, and who met to seek a solution to these problems for future generations. The International Indian Treaty Council (IITC) is an organization of Indigenous Peoples advocating the recognition and protection of Indigenous Rights through networking, coalition building, technical assistance, and facilitating the effective participation of traditional Peoples in local, regional, national and international forums, events and gatherings.

www.treatycouncil.org
(1) IITC Program Priorities
The International Indian Treaty Council program priorities include responding to threats and violations of Indigenous Peoples’ rights which include: Sovereignty, Self-Determination & Free Prior Informed Consent; Health & Environmental impacts of nuclear and toxic contamination, mining, drilling, dams, deforestation and climate change; Food Sovereignty & Subsistence Rights; Violations of Treaty, and Land & Water Rights.
International Indian Treaty Council Brochure (PDF)

(2) Statement Regarding Water, Climate Change/Global Warming and the Stockholm Convention on Persistent Organic Pollutants (POPs)
http://www.treatycouncil.org/PDFs/PF3_Agenda4_b_Environment_English.pdf

(3) Declaration of the First International Forum of Indigenous Peoples on Climate Change
Key positions of Indigenous Peoples present at the UNFCCC 13th Session of Subsidiary Bodies Meeting held in Lyon, France on September 4-6, 2000.
http://www.treatycouncil.org/new_page_5211.htm

INTERNATIONAL PRIMATE PROTECTION LEAGUE
Created in 1973, the International Primate Protection League is devoted to the conservation and protection of non-human primates, both in captivity and in the wild, through public education, fund-raising, project support and the monitoring of zoo and laboratory conditions as well as trade, action and research.
www.ippl.org

No climate-related activities.

INTERNATIONAL SPECIES INFORMATION SYSTEM
Founded in 1974, International Species Information System (ISIS) is a global zoo specimen information network, offering two kinds of services: a) reports from a central database of over 1,300,000 individual captive specimens of 7,600 species of vertebrates, and b) collection and species management software for use by member institutions.
www.isis.org

No climate-related activities.

NATIONAL GEOGRAPHIC SOCIETY
The National Geographic Society (NGS), headquartered in Washington, D.C., is one of the largest non-profit scientific and educational institutions in the world. Its interests include geography, archaeology, and natural science, the promotion of environmental and historical conservation, and the study of world culture and history. The NGS’s historical
mission is to increases and diffuse geographic knowledge in the broad sense (the
description of land, sea and universe; the interrelationship of man with the flora and
fauna of the earth; and the historical, cultural, scientific, governmental and social
background of people); to conduct and assist investigation, research and exploration in
any branch of geography; and to encourage and assists the experience and knowledge of
other cultures and land. The National Geographic Society today is propelled by new
concerns: the alarming lack of geographic knowledge among our nation’s young people
and the pressing need to protect the planet’s natural resources. National Geographic's
grant programs support critical scientific research, geographic exploration, and
environmental and cultural conservation worldwide.
http://www.nationalgeographic.com/

(1) Global Warming Awareness
The National Geographic Society is committed to educating the world about
global warming. National Geographic raises awareness of issues related to global
warming and climate change primarily through its Global Warming webpage.
National Geographic also provides extensive coverage of global warming and
climate change-related issues through news.nationalgeographic.com,
TheGreenGuide.com, National Geographic magazine, and the National
Geographic Channel. The Global Warming webpage provides information related
to global warming covering a wide-range of topics including Effects, Causes,
Solutions, and The Science.

(2) Alternative Energy Awareness
The National Geographic Society is committed to educating the world about
alternative energy. National Geographic raises awareness of issues related to
alternative energy primarily through its Alternative Energy webpage. National
Geographic also provides extensive coverage of alternative energy topics and
issues through news.nationalgeographic.com, TheGreenGuide.com, National
Geographic magazine, and the National Geographic Channel. The Alternative
Energy webpage provides information related to alternative energy covering a
wide-range of topics including Biofuel, Fuel Cells, Geothermal Energy,
Hydropower, Solar Energy, and Wind Power.
http://science.nationalgeographic.com/science/environment/alternative-energy/

(3) Climate Connections
Climate Connections is a multiplatform initiative launched by NPR and the
National Geographic Society focusing on how people and climate affect each
other. This is the first media project of this scale to look specifically at the
relationship between human behavior and climate. The initiative spans all NPR
News programs and NPR.org, as well as National Geographic's many media
platforms, including National Geographic magazine and nationalgeographic.com,
incorporating the diverse, shared resources of National Geographic and NPR. A
central element of "Climate Connections" is the wide-ranging slate of NPR News
coverage that will air within all NPR programs. NPR.org will offer a significant
online presence for the project that incorporates audio and video podcasts, streaming audio and links to National Geographic editorial content and image archive. "Climate Connections" will be featured through monthly coverage in National Geographic magazine. The initiative will be covered by Nationalgeographic.com through news.nationalgeographic.com, podcasts and green.nationalgeographic.com, nationalgeographicmagazine.com and TheGreenGuide.com. The initiative also will be a monthly segment on "Wild Chronicles," a weekly television series airing on public television stations nationwide and supported by National Geographic Mission Programs.

**National Geographic’s Climate Connections** Website
**NPR’s Climate Connections** Website

(4) **The Green Guide**
Originated as a print newsletter in 1994, then expanded into a web site, thegreenguide.com, in 2002, Green Guide was acquired by National Geographic Society in March 2007, as part of NGS' global commitment to inform and inspire people to care about the planet. Dubbed the "green living source for today's conscious consumer", the Green Guide makes living in an environmentally-aware way easy, understandable, and practical. Intended for general consumers, the Green Guide shows people how to make small changes that add up to big benefits for their wallets, for their health, and, of course, for the health of the planet. The Green Guide offers buying guides, blogs, tips & tools, travel guides, and tips for Green Living. The Green Guide is available in print and on the web.
http://www.thegreenguide.com/

(5) **National Geographic Magazine June 2007 issue: The Big Thaw**
The June 2007 issue of National Geographic Magazine featured a cover story on climate change titled “The Big Thaw.” The article, written by Tim Appenzeller and photographed by James Balog, details the impact of the warming climate on the world’s glaciers and polar ice from Greenland to Antarctica.
The online feature includes the full article, photo gallery, interactive map, forum, poll, and more.

(6) **National Geographic Global Warming TV Show**
National Geographic expanded its commitment to educate the world about global warming by premiering its television program “Six Degrees Could Change the World.” The series is framed by the National Geographic's recently launched The Green Guide campaign and is based on a book Six Degrees, in which the author Mark Lyman presages the effects a mere six-degree temperature increase can have on our planet. The new National Geographic Channel series visualizes in spectacular HD the devastating ecological impact of each single degree increase in temperature could have on our planet over the next century.
**NGC Six Degrees Could Change the World Series** Website
National Geographic addressed climate change at the IDB

On June 24, 2008, National Geographic Executive Editor, Dennis Dimick, presented at IDB headquarters a visual journey of climate change, sharing highlights of the magazine’s features and scientific reports documenting climate change in “A Visual Journey Through Our Changing Climate.” In brief, the industrial world's economic demand for coal, oil, and natural gas is raising carbon dioxide (CO2) emissions, which in turn speed up the process of global warming. Dimick explained the impacts of higher temperatures, such as melting glaciers, intensifying storms and floods, and a rise in sea level. But he also addressed how population demand of resources plays a crucial role in slowing down or increasing CO2 emissions.

Videos – Dennis Dimick, Executive Editor, National Geographic:
1. What can citizens do about climate change?
2. What can governments do to reduce greenhouse gas emissions?


NATURESERVE
Providing the scientific basis for effective conservation, NatureServe and its network of natural heritage programs are the trusted source for information about rare and endangered species and threatened ecosystems. NatureServe’s mission is to provide the scientific information and technology needed to help guide effective conservation action. www.natureserve.org

No climate-related activities.

PACIFIC SEABIRD GROUP
The Pacific Seabird Group (PSG) is a society of professional seabird researchers and managers dedicated to the study and conservation of Pacific seabirds and their environment. http://www.pacificseabirdgroup.org

(1) 36th Annual Meeting of the Pacific Seabird Group
The 36th Annual Meeting of the Pacific Seabird Group will be held February 18-26, 2009 in Hokodate, Hokkaido, JAPAN. Dr. Bill Sydeman of the Faillaron Institute for Advanced Ecosystem Research is scheduled to speak on climate change and seabirds. PSG 36th Annual Meeting Website

RAINFOREST ALLIANCE
The work of the Rainforest Alliance is guided by core values such as respect and concern for natural environments, local peoples and all stakeholders; dedication to pioneering pragmatic innovations with respect to common practices and a belief that sustainability is achievable only through collaboration and mutual success. The Rainforest Alliance’s mission is to conserve biodiversity and ensure sustainable livelihoods by transforming land use practices, business practices and consumer behavior.
(1) **Carbon Services**
The Rainforest Alliance is helping to mitigate the effects of greenhouse gas emissions by:
- Enabling sustainably operated farms, forests and tourism businesses to create and market carbon projects in the international market;
- Verifying both greenhouse gas sequestration projects and emission reductions to internationally recognized standards; and
- Connecting companies with community-run carbon credit projects that promote sustainable land use.

(2) **Helping Communities to Gain Access to the Carbon Credit Market**
By making the international carbon offset market more accessible to communities in developing countries, the Rainforest Alliance is providing these communities with incentives to protect natural resources. The Rainforest Alliance helps community-based operations define their potential to provide carbon offsets, providing guidance on appropriate methodologies, steps to project development and carbon standards.
Principally but not exclusively, their services are directed toward operations certified by the Rainforest Alliance to the standards of the Forest Stewardship Council and Sustainable Agriculture Network or engaged with the Rainforest Alliance in providing sustainable tourism options.

(3) **Verifying Conservation Carbon Credits**
Offset projects verified to standards that address not only greenhouse gas sequestration, but also biodiversity conservation and sustainable livelihoods, are particularly valuable in today's carbon market. The Rainforest Alliance conducts verification of farm and forest carbon projects for the Climate, Community & Biodiversity Alliance, Chicago Climate Exchange and Plan Vivo. Forest Stewardship Council certified plantations and natural forests and Rainforest Alliance Certified farms, as well as those engaged in a step-wise approach to achieving one of those certifications, are our first verification priority.

(4) **Carbon Services Connections for Companies**
Once a farm, forest, hotel or other tourism business thoroughly analyzes its carbon emissions and establishes a reduction plan, the Rainforest Alliance can connect it to a carbon conservation project that meets its particular regional, industrial and development criteria. Carbon credits from sustainably managed land-use projects are credible investment options for responsible companies seeking to offset their carbon footprint.

**RARE**
Rare is a conservation organization that works globally to equip people in the world’s most threatened natural areas with the tools and motivation they need to care for their natural resources. Rare focuses as much on people as on science-addressing the
underlying social and economic factors that create environmental threats. As a result, Rare is one of the largest ever global grassroots conservation movements, with tangible results at the community level on five continents. Rare’s mission is to conserve imperiled species and ecosystems around the world by inspiring people to care about and protect nature.

www.rareconservation.org

No climate-related activities.

SIERRA CLUB
Established in 1892, the Sierra Club aims to explore, enjoy and protect the wild places of the earth, to practice and promote the responsible use of its ecosystems and resources, to enlist humanity to protect and restore environmental quality, and to use all lawful means to carry out these objectives.

www.sierraclub.com

(1) Smart Energy Solutions to Global Warming
The Sierra Club's network of activists and volunteers are dedicated to cleaning up our vehicles, buildings, and electricity grid to drastically cut carbon emissions and curb global warming. Smart Energy Solutions to Global Warming is a Sierra Club Conservation Initiative.

http://www.sierraclub.org/energy/

- Global Warming Policy Solutions
  The Sierra Club believes that in order to safely and effectively mitigate the effects of climate change, comprehensive global warming legislation must accomplish the following:
  1. Reduce emissions to avoid dangerous global warming.
  2. Transition America to a clean energy economy in a just and equitable way.
  3. Aid communities and ecosystems vulnerable to harm from global warming.

In addition to passing comprehensive global warming legislation, the Sierra Club believes in federal energy policy that will transition us away from our dirty, fossil-fuel past toward a clean energy future. Energy Bills in Congress the Sierra Club Supports. The Sierra Club is also conducting local campaigns across the country to conserve our energy use and use cleaner energy.

http://www.sierraclub.org/energy/energypolicy/

- Clean Car Campaign
  The Sierra Club's Clean Car Campaign is putting pressure on automakers to use current technology to build cars and trucks that will move America towards energy independence, save consumers money at the pump, and curb global warming. For the past two decades, the Sierra Club's Clean Car Campaign has pressured the United States Congress and automakers to raise the fuel economy of new cars and light trucks as a way to address climate change and decrease our dependence on foreign oil.
The Biggest Single Step
The Biggest Single Step is Sierra Club’s advocacy campaign to increase the fuel efficiency of automobiles and raise the Corporate Average Fuel Economy (CAFE) standards. Raising CAFE standards to 45 miles per gallon (mpg) for cars and 34 mpg for light trucks (trucks, vans, and sport utility vehicles) is the biggest single step we can take to curb global warming.

Trade and Climate Change
To ensure that our climate policy not only safeguards the environment, but maintains and generates jobs, the Sierra Club and our diverse coalition of partners supports the following solutions:

1. **Build a New Trade Model** – Trade rules and the institutions that enforce them must allow systematic exceptions for climate protection measures that might otherwise violate trade rules.

2. **Auction Emissions Permits** – The implementation of a U.S. national cap and auction system wherein pollution permits are auctioned and revenue from auctions is used for the public good.

3. **Pursue the Cleanest, Safest, Fastest and Cheapest Solutions First** – The achievement of a forward looking energy policy which would begin to phase-out the fossil fuels and phase-in clean and safe renewable energy such as solar, wind, and biomass while increasing energy efficiency in homes, commercial buildings and vehicles.

4. **Address Deforestation and Illegal Logging** – The establishment of measures to prevent increased illegal logging, including commerce rules curtailing the sale, shipment or trade in illegally harvested timber products.

5. **Create Jobs and Increase Efficiency** – Support for the development of clean energy jobs including training for workers to assist in the transition to renewable energy technologies as well as government procurement measures that prioritize the use of locally produced products, local labor, and payment of prevailing wages.

Cool Cities
Begun in 2005, the Cool Cities campaign empowers city residents and local leaders to join and encourage their cities to implement smart energy solutions to save money and build a cleaner, safer future.

Sierra Club’s Action Center on Facebook
Sierra Club utilizes Facebook to let users take the latest actions to stop global warming and to protect America’s wild legacy. Users are able to give friends
cool green gifts to friends and keep up-to-date on all of the latest Sierra Club news.

Sierra Club’s Action Center on Facebook

SOCIETAS INTERNATIONALIS LIMNOLOGIAE THEORETICAE ET APPLICATAE
Created in 1922, The International Association of Theoretical and Applied Limnology (Societas Internationalis Limnologiae Theoreticae et Applicatae, SIL) promotes and communicates new and emerging knowledge among limnologists to advance the understanding of inland aquatic ecosystems and their management.

www.limnology.org

No climate-related activities.

SOCIETY FOR CONSERVATION BIOLOGY
Created in 1985, the Society for Conservation Biology is an international organization for scientific and management professionals concerned with the protection of biodiversity. It produces a quarterly journal "Conservation Biology", and has an annual meeting.

www.conservationbiology.org

(1) Policy Priorities – Climate Change
SCB and its allies will recommend that the U.S. and other governments ask the full range of questions and consider the available data and options for action across the relevant disciplines while formulating policies on climate change and include conservation biology throughout the range of responses to climate change.

(2) Research Papers
• Carbon Sequestration in Forests, Ross Gorte, Congressional Research Service, March 2007
• Climate Change: Three Policy Perspectives (PDF), Larry Parker, John Blodgett, Congressional Research Service, Feb 2007
• Evaluating the Role of Prices and R&D in Reducing Carbon Dioxide Emissions (PDF), Congressional Budget Office, Sept. 2006

SOCIETY FOR ECOLOGICAL RESTORATION INTERNATIONAL
The Society for Ecological Restoration (SER) International is a non-profit organization actively engaged in ecologically-sensitive repair and management of ecosystems. The organization’s mission is to promote ecological restoration as a means of sustaining the diversity of life on Earth and reestablishing an ecologically healthy relationship between culture and nature.

www.ser.org

No climate-related activities.
**WILD SALMON CENTER**
The Wild Salmon Center protects globally significant salmon ecosystems. The Center’s mission is to identify, understand and protect the best wild salmon ecosystems of the Pacific Rim. The Center devises and implements practical strategies, based on the best science, to protect forever these extraordinary places and their biodiversity.

[www.wildsalmoncenter.org](http://www.wildsalmoncenter.org)

(1) **North America Program**
The Wild Salmon Center is working with scientists, government agencies, businesses and local communities to identify and conserve the most important remaining salmon strongholds in the United States Pacific Coast region. The Center protects river basins which offer salmon the best chance of surviving the long-term impacts of natural resource development and global warming.

**WILDLIFE TRUST**
The Wildlife Trust is an international organization of scientists dedicated to the conservation of biodiversity. The Trust works to conserve threatened wild species and their habitat in partnership with local scientists and educators around the world.

[www.wildlifetrust.org](http://www.wildlifetrust.org)

(1) **Conservation Solutions**
The Wildlife Trust Alliance is grappling with finding solutions for today’s most compelling challenges: conserving fragmented ecosystems, addressing threats to biodiversity from climate change, understanding emerging infectious diseases and ecosystem health. Alliance members are making a difference in the developing world by protecting endangered and threatened species and training future conservationists.

**WORLD ENVIRONMENT CENTER**
Founded in 1974, the World Environment Center (WEC) is an independent, global non-profit, non-advocacy organization that advances sustainable development through the business practices of member companies and in partnership with governments, multilateral organizations, non-governmental organizations, universities and other stakeholders.

[www.wec.org](http://www.wec.org)

(1) **Capacity Building: Advancing Sustainable Solutions**
WEC oversees a range of capacity building initiatives including: improving energy efficiency; reducing the use of water and other natural resources; enhancing environmental, health and safety performance; reducing chemical risks; investing in social capital; and promoting global citizenship activities.

**Current Projects:**
- **Greening the Supply Chain**
  In 2003, the World Environment Center (WEC), together with USAID, developed a model to promote the adoption of cleaner production and energy
efficiency by Small and Medium-Sized Enterprises. WEC initially partnered with Alcoa, Dow and Johnson & Johnson and worked with their Mexican and Brazilian suppliers. The projects resulted in cost savings, higher productivity, improved health and safety practices while significantly reducing the resource use of water, energy and raw materials per unit of output. Relying on the initial success of this initiative, WEC tailored and implemented additional projects for the supply chains of General Motors in China, Johnson & Johnson in Brazil, and Alcoa in Romania during the past two years. The following documents provide additional information about WEC’s methodology and illustrate successful examples:

*Greening the Supply Chain Summary (PDF)*
*Capacity Building: Advancing Sustainable Solutions Brochure (PDF)*

- **WEC Alliance for Private Sector Competitiveness in El Salvador**
  In November, 2005, the World Environment Center (WEC) established the Alliance for Private Sector Competitiveness in El Salvador under funding from a cooperative agreement with the U.S. Agency for International Development (AID). The goal of the program is to promote economic development in El Salvador through strengthening the ability of Salvadoran businesses to produce products, goods and services more competitively, using less energy and in a sustainable and environmentally responsible manner. WEC emphasizes techniques and partnerships that will enhance the competitiveness of Salvadoran businesses and capabilities of their employees, so that they may be better prepared to take advantage of local and regional trade opportunities such as through the Central American Free Trade Agreement (CAFTA). At the same time, WEC is working with Ministry of Environment and Natural Resources (MARN) and Ministry of Economy (MINEC) in helping build institutional capacity by creating a framework for collaborative public-private approaches for improved environmental performance. This work is additionally guided by a high-level executive steering committee comprised of senior representation from not only MINEC and MARN, but also the National Association of Industry Associations (ANEP) and the National Agro-Industrial Association (Camagro).

*El Salvador Project Factsheet (PDF)*

(2) **Roundtable on “Corporate Strategies in Response to Climate Change”**

The Environment Science Center (ESC) hosted a roundtable titled *Corporate Strategies to Adapt to Climate Change*, a World Environment Center event, held in Augsburg, Germany on October 24-25, 2007. The Augsburg Roundtable on Corporate Strategies in Response to Climate Change focused on four critical questions facing business and sustainability leaders:

- What are the critical climate-related assumptions that are informing future business strategy development?
- How is your existing business model, product portfolio and investment strategy changing as a result of climate change?
– How is your company implementing these changes? What new goals, organizational design, product introductions and customer strategies are under development?
– How are you simultaneously integrating the process of expanding business value while creating societal value in responding to climate change?

The Augsburg Roundtable showcased business strategies and other practices that reduce or reverse industry’s and, hence, society’s carbon footprint and fostered creative dialogue among leaders of various business sectors, multi-lateral and national governmental organizations and other parties.

Roundtable Agenda (PDF)

(3) Roundtable on “The Future of our Energy Choices”

Changing the Future of Our Energy Choices continues a series of WEC energy solution roundtables to hear from industry, the non-profit sector, and academia on what the goal is for the energy equation in the next several decades, and how we’re working to get there. Panelists and presenters discussed initiatives and scenarios for the future- and their thoughts on how to develop energy sustainably.

The event was hosted by Chrysler and held at the National Press Club in Washington, D.C. on October 17-18, 2007.

Roundtable Agenda Draft (PDF)
WOODLAND PARK ZOOLOGICAL SOCIETY
Established in 1965, the Woodland Park Zoological Society is a non-profit corporation formed for the purposes of upholding the Seattle’s Woodland Park Zoological Gardens objectives of education, wildlife conservation and the preservation of endangered species. It helps to build naturalistic habitats at the zoo, and to sponsor educational activities.

www.zoo.org

(1) Climate Change Messaging

- Engaging the Public on Global Climate Change
  “Engaging the Public on Global Climate Change” in discussion stage with Univ. of Washington and Climate Solutions. Hope for NSF funding to include: interactive exhibits at zoo, aquarium with emphasis on climate solutions; joint programming for K-12 and general public; teacher workshops, seminars.

- Zoo Footprint
  Woodland Park Zoo planning “zoo footprint” project as guide towards sustainable operations and will message these success stories to visitors.
The Bureau of Oceans and International Environmental and Scientific Affairs is the central contact point with other US Government departments and agencies for liaison on functional policy and programmes abroad. The Bureau develops positions and strategy for dealing with international environmental issues in international negotiations. The mission of the Bureau is to advance sustainable development internationally through leadership in oceans, environment, science and health. The Bureau of Oceans, Environment, and Science (OES) promotes transformational diplomacy through advancing environmental stewardship, encouraging economic growth, and promoting social development around the globe to foster a safer, more secure and hopeful world. The Bureau may head or participate in, as appropriate, US delegations to international conferences concerned with environmental issues, including weather, atmosphere, oceans, polar affairs, fisheries, wildlife, biological diversity, forests, hazardous waste, health, population, and debt and other economic issues related to sustainable development and the conservation of nature.

http://www.state.gov/g/oes/

Bureau’s Climate Change Webpage: http://www.state.gov/g/oes/climate/

(1) U.S. Actions to Address: Energy Security, Clean Development, and Climate Change

Fact Sheet
Bureau of Oceans and International Environmental and Scientific Affairs
Washington, DC
March 31, 2008
http://www.state.gov/g/oes/rls/fs/2008/102910.htm

Climate change and energy security pose serious interlinked challenges, the scale and scope of which will require a global response as well as national actions. The world community must slow, stop, and reverse greenhouse gas (GHG) emissions in a way that promotes sustainable economic growth, increases energy security, and helps nations deliver greater prosperity for their people.

The December 2007 UN climate change conference in Bali, Indonesia opened a critical new chapter in climate diplomacy. The United States supports the Bali Action Plan. We are committed to working under the UN Framework Convention on Climate Change (UNFCCC) to develop a post-2012 climate regime that is environmentally effective and economically sustainable. The United States is prepared to enter into binding international commitments to reduce GHG emissions as part of a global agreement in which all major economies similarly undertake binding international commitments. We
recognize that the content of these commitments will depend on each country’s circumstances and capabilities.

**International Leadership – Recent Initiatives:**

**Major Economies Process on Energy Security and Climate Change:** The United States initiated a series of meetings that brings 17 of the world’s major economies together to reinforce and accelerate global efforts under the UNFCCC in order to support and contribute to a global agreement under the Convention by 2009.

**International Clean Technology Fund:** The United States has committed to provide $2 billion to a new international clean technology fund to help developing nations harness the power of clean energy technologies. The Fund would be administered by the World Bank, but would work through a broad range of Multilateral Development Banks, including their private sector arms. In developing the Fund, we are cooperating closely with the United Kingdom and Japan, together with a broad set of potential donors and stakeholders, including our G8 partners. The Fund aims to stimulate and leverage private sector investment in clean technology to support developing country actions limiting GHG emissions. We believe countries seeking access to the Fund should be undertaking credible national plans to limit GHGs and have those plans reflected in a post-2012 international climate change arrangement.

**Proposal on climate friendly environmental goods and services:** To promote the widespread adoption of affordable clean technologies in the developing world, the United States recently joined the European Union in submitting a groundbreaking proposal in the World Trade Organization for eliminating tariff and non-tariff barriers for environmental goods and services. A recent World Bank study on climate and clean energy technologies suggests that removing tariff and non-tariff barriers could increase trade in key technologies, thereby increasing their diffusion, by 7-14 percent.

**Washington International Renewable Energy Conference:** Building on successful conferences in Bonn in 2004 and Beijing in 2005, the United States hosted the Washington International Renewable Energy Conference (WIREC) March 4-6, 2008. More than 3,000 delegates from 113 countries joined over 4,000 private sector representatives in an unprecedented gathering focused on developing and deploying renewable energy, promoting sustainable development, and reducing GHG emissions. More than 100 voluntary pledges in the Washington International Action Plan will result in increased renewable energy use.

**Innovative International Partnerships:** The United States continues to pursue a range of collaborative, public-private partnerships that increase global capacity to reduce GHG emissions, improve energy security and cut harmful air pollution. In addition to our 15 bilateral and regional climate change partnerships launched since 2002, the United States is working in partnership on a wide array of strategies to reduce GHG emissions, including through technologies such as hydrogen fuel, carbon sequestration, and cleaner more efficient nuclear technologies. Results include:
• **The Methane to Markets Partnership (M2M):** With 24 partner nations and the European Commission, and an extensive project network of over 600 members, M2M could recover up to 180 million metric tons of carbon dioxide equivalent annually by 2015.

• **The Asia-Pacific Partnership on Clean Development and Climate (APP):** This initiative engages the governments and private sectors of the seven partner nations (Australia, Canada, China, India, Japan, Republic of Korea, and the United States) to enhance capacity and deployment of clean energy technologies and address their energy, clean development, and climate goals. Examples of APP successes include:
  
  o Developed and initiated new Energy Efficiency labels used in China, similar to those in the U.S. ENERGY STAR program - are expected to encourage Chinese consumers to use more energy efficient appliances. This APP-coordinated activity, currently focusing on just one pilot consumer product, television set-top boxes, is projected to bring about an annual carbon emission reduction of 17.7 million tons of CO$_2$, the equivalent of removing three million cars from the road.
  
  o Solar Turbines, an APP private sector partner, has worked with Chinese partners to identify and setup units that provide 35 megawatts of clean energy technology to the coking industry in China. Initial projections indicate an annual savings of approximately 410,000 metric tons of CO$_2$ equivalent when all units are operational.

**Domestic Action**

**Decline in emissions growth** From 2000-2006, the population of the United States grew by 5.8 percent (16.5 million people) and GDP grew by 15 percent (about $1.5 trillion) while our GHG emissions growth was only 0.3 percent; comparable to the results of many other developed nations.

**Ambitious near term domestic measures:** We have a diverse portfolio of policy measures including dozens of mandatory, incentive-based, and voluntary programs for our domestic emissions. The Energy Independence and Security Act of 2007 introduced substantial new mandatory domestic programs to address energy security and climate change. Taken together, these programs will reduce projected GHG emissions by an estimated six billion metric tons by 2030. The policies embodied in this Act and other programs represent a bipartisan consensus in the United States, and include:

  • **Renewable fuels** - 36 billion gallons or roughly 15 percent of fuel supply by 2022
  
  • **Vehicle Fuel Economy** - 40 percent improvement to 35 mpg (miles per gallon) by 2020
  
  • **Lighting Efficiency** - 25 to 30 percent improvement by 2012-2014, 70 percent by 2020
  
  • **Appliance Efficiency** – at least 45 new appliance efficiency standards
  
  • **Federal Government Operations** - 30 percent efficiency improvement and 20 percent renewable fuel use by 2015
- **Building Codes** - Federal government developing model codes to improve building efficiency by 30 percent
- **Accelerated Phaseout** of Hydrochlorofluorocarbons, a powerful greenhouse gases
- **ENERGY STAR** program reduced emissions by 135 MMTCO$_2$E in 2008
- **Domestic Methane Programs** reduced 2006 methane emissions to 8% below 1990 levels

**Unmatched investments in science and technology**: The President has devoted nearly $45 billion to climate change since 2001 for climate-related science, technology, observations, international assistance and incentive programs and he has requested $8.6 billion more in FY2009. U.S. investments in energy technology research have increased from $1.7 billion in 2001 to over $4 billion per year, and, as a result of the 2005 Energy Bill and FY08 appropriations, there is now $42.5 billion available for federal loan guarantees to promote the deployment in the United States of clean energy technology.
GOVERNMENT AGENCY WITH STATE MEMBER

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

Created in 1970, the National Oceanic and Atmospheric Administration (NOAA) conducts research and gathers data about oceans, atmosphere, space and sun, applying this knowledge to products and services of benefit to all. NOAA’s mission is to describe and predict changes in the Earth’s environment, and conserve and manage wisely the Nation’s coastal and marine resources to ensure sustainable economic opportunities.

www.noaa.gov

(1) NOAA’s Climate Activities

NOAA is charged with helping society understand, plan for, and respond to climate variability and change. This is achieved through the development and delivery of climate information services, the implementation of a global observing system, and focused research and modeling to understand key climate processes. The NOAA climate mission is an end-to-end endeavor focused on providing a predictive understanding of the global climate system so the public can incorporate the information and products into their decisions.

http://www.noaa.gov/climate.html

NOAA’s climate programs are focused on three themes:

- **Climate Observations and Monitoring** to describe and understand the state of the climate system through integrated observations, monitoring, data stewardship;
- **Climate Research and Modeling** to understand and predict climate variability and change in timeframes ranging from weeks to a century; and
- **Climate Information Services** to improve the ability of society to plan and respond to climate variability and climate change.

NOAA is a key participating agency in the U.S. Climate Change Science Program (CCSP) as well as other significant international, national, and regional activities.

(2) Climate Program Office (CPO)

NOAA’s Climate Program Office (CPO) manages competitive grant programs, leads NOAA climate international, education and outreach activities, and coordinates climate activities across NOAA. These activities serve as a
foundation for NOAA’s participation in the interagency U.S. Climate Change Science Program (CCSP). NOAA relies on its federal, academic, private, and international partners to achieve its objectives. These objectives are implemented through five distinct, yet integrated, programs: Climate Observation and Analysis, Climate Forcing, Climate Predictions and Projections, Climate and Ecosystems and regional Decision Support.
http://www.climate.noaa.gov/

(3) **Operational Climate Program**
NOAA’s operational climate program monitors and forecasts short-term climate fluctuations and provides information on the effects climate patterns can have on the nation.
http://www.cpc.noaa.gov/index.php

(4) **NOAA Office of Global Programs**
The Office of Global Programs (OGP) leads the NOAA Climate and Global Change Program. NOAA has the primary responsibility within the Federal Government to routinely provide climate forecasts and products to the Nation. OGP assists in this capacity by sponsoring focused scientific research, within approximately eleven research elements, aimed at understanding climate variability and its predictability. Through studies in these areas, researchers coordinate activities that jointly contribute to improved predictions and assessments of climate variability over a continuum of timescales from season to season, year to year, and over the course of a decade and beyond.
http://www.ogp.noaa.gov/

**US AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)**
US Agency for International Development (USAID) is an independent federal government agency that receives overall foreign policy guidance from the Secretary of State. The Agency’s work supports long-term and equitable economic growth and advances U.S. foreign policy objectives by supporting: economic growth, agriculture and trade; global health; and, democracy, conflict prevention and humanitarian assistance. The Agency provides assistance in five regions of the World: Sub-Saharan Africa; Asia; Latin American and the Caribbean, Europe and Eurasia; and the Middle East.
http://www.usaid.gov/

(1) **Global Climate Change Program**
Addressing the causes and effects of climate change has been a key focus of USAID’s development assistance for over a decade. USAID has funded environmental programs that have reduced growth in greenhouse gas (GHG) emissions while promoting energy efficiency, forest conservation, biodiversity, and other development goals. This “multiple benefits” approach to climate change helps developing and transition countries achieve economic development without sacrificing environmental protection. To help countries address domestic and international climate change priorities, USAID’s Global Climate Change (GCC)
Program is active in more than 40 countries and dedicates about $180 million a year to promote:

- **Clean Energy Technology**
- **Sustainable Land Use and Forestry**
- **Adapting to Climate Variability and Change**
- **Capacity Building**
- **Climate Science for Decision-Making**

USAID places particular emphasis on partnerships with the private sector and on working with local and national authorities, communities, and nongovernmental organizations to create alliances that build on the relative strengths of each. Through training, tools, and other means of capacity building, USAID helps developing and transition countries address climate-related concerns as a part of their development goals.


**Global Climate Change Program Brochure** (PDF)

- **Country and Regional Information**
  USAID’s Climate Change Program is active in over forty countries, with certain countries and regions identified as priority areas for climate change-related interventions. The Agency has identified the countries of Brazil, India, Indonesia, Mexico, Philippines, Russia, and South Africa as key countries and focuses its efforts in three sub-regions: Central Africa (including Cameroon, the Central African Republic, the Republic of Congo, the Democratic Republic of Congo, Equatorial Guinea and Gabon), Central America (including Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama) and Central Asia (including Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan). These countries were selected because they include the largest greenhouse gas emitters and countries with significant potential for, and interest in, land-based carbon sequestration.


- **Current Program Projects**
  - [Global Climate Change Program: Guatemala](http://www.fs.fed.us/) (PDF)
  - [Global Climate Change Program: Africa](http://www.fs.fed.us/), October 2006
  - [Global Climate Change Program: Asia and the Near East](http://www.fs.fed.us/), April 2007
  - [Global Climate Change Program: Europe and Eurasia](http://www.fs.fed.us/), May 2007
  - [Global Climate Change Program: Latin America and the Caribbean](http://www.fs.fed.us/), April 2007

**US FOREST SERVICE**

Established in 1905, The US Forest Service is an agency of the U.S. Department of Agriculture that manages public lands in national forests and grasslands.

[http://www.fs.fed.us/](http://www.fs.fed.us/)

(1) **Research & Development - National Program for Global Change Research**

Forest Service Research and Development provides long term research, scientific knowledge, and tools that can be used to manage, restore, and conserve forests
and rangelands. The research is both basic (foundation for future understanding) and applied (for use by practitioners). The mission of USDA's Forest Service Research and Development (FS R&D) is "to develop and deliver knowledge and innovative technology to improve the health and use of forests and rangelands." As a land management agency, the US Forest Service has a unique responsibility to address questions about climate change mitigation and adaptation involving the many issues that challenge forest and rangeland owners, managers, and users. FS R&D focuses its many strengths and capabilities to address questions about climate change impacts; the adaptation actions needed to increase resilience of forests and ranges to the impacts; the potential of forests to mitigate atmospheric greenhouse gas (GHG) concentration changes by storing additional carbon in living vegetation and forest products; and reducing fossil carbon use by increasing production of biofuels and substituting forest products for more GHG-intensive materials. Overall FS R&D global change research priorities involve the three areas of adaptation (maintaining vegetation vitality under changing climate, to continue providing required ecosystem services), mitigation (increasing carbon storage in soils, living plants and wood products, reducing fossil fuel emissions by increasing biofuel use), and policy support (writing national and international assessments, reporting US and UNFCCC greenhouse gases). The Forest Service has the Nation’s Forest Census known as the Forest Inventory and Analysis program that provides information essential to understanding climate change and other stresses on ecosystem dynamics. Critical research is still needed to develop adaptation and mitigation strategies. FY06 enacted budget for climate change research totaled over $18 million.

http://www.fs.fed.us/research/fsgc/climate-change.shtml

Current Projects and Research

• National Leadership Roles
  In collaborations with the Pacific Northwest and Pacific Southwest Research Stations, and university partners, the Rocky Mountain Research Station has taken key leadership roles in catalyzing coordinated and integrated research to develop information and tools to support land management and planning under climate change.
  http://www.fs.fed.us/rmrs/climate-change/national-leadership/

• Effects on Ecosystems and People
  The diversity of environmental conditions across the RMRS territory — with landscapes from the Mexican border to the Canadian border — serves as a laboratory for studying climate change in the Interior West. Rocky Mountain Research Station scientists are studying climate as it influences plants, animals, ecosystems, disturbance patterns, and social and economic systems. This research supports land management and planning needs for addressing climate change.
  http://www.fs.fed.us/rmrs/climate-change/ecosystems-people/
• **Other Research Underway:**
  - How carbon cycles through forest and rangeland ecosystems, and how the management and use of these ecosystems affects the amounts of carbon from the atmosphere retained in forests and rangelands;
  - How the rate and intensity of climate change affects forest growth, productivity and health;
  - How climate-induced changes in natural disturbances can be mitigated and reduced in cost-effective and environmentally beneficial ways;
  - How the maximum resilience to rapid climate change by forests and rangelands can be managed.
  - How biomass utilization will help reduce fire impacts by reducing fuel loads and how reduced fuel loads and carbon stocks can be done to allow for needed increases in carbon sequestration.

(2) **Northern Institute of Applied Carbon Science**
The Northern Institute of Applied Carbon Science (NIACS) is a collaborative effort of the Forest Service, universities, and forest industry to provide ecological, economic, and social information that can be used to manage forests for the sequestration of atmospheric carbon. Forests store and/or retain carbon while simultaneously producing sustainable supplies of renewable energy and materials that help society. There are significant uncertainties, however, about how forest systems might respond to future climate change and how forest management could be used to ameliorate any negative effects.

http://nrs.fs.fed.us/niacs/

**Strategic Objectives and Supporting Documents**

• NIACS communicates research to obtain three outcomes:
  - Increase carbon sequestration in northern forests by facilitating essential forest ecosystem research and providing information to forest managers.
  - Increase the production of energy and materials from forest sources by providing information that will help bio-based energy serve as a substitute for fossil fuels.
  - Sustain or improve local economies by supplying communities with information and tools needed to boost economic returns while having neutral or positive impacts on ecosystem services.

• Fact sheets provide the principal information on essential concepts for understanding carbon science.
  - [The Carbon Cycle](#) (PDF)
  - [Carbon Sequestration](#) (PDF)
  - [Bioenergy from Wood](#) (PDF)
  - [The Rhizotron: Its Significance to Climate Change](#) (PDF)

• Briefings synthesize scientific information about pivotal issues related to carbon management.
  - [Carbon Sequestration from Land-Use Change](#) (PDF)
  - [Chicago Climate Exchange](#) (PDF)
Biomass Partitioning in Red Pine (PDF)
Estimating Carbon Mass in Northern Forests (PDF)

- Presentations have summary information on topics relevant to current areas of interest and past projects.
  Forest Carbon Management (PDF)
  Bioenergy: What's it all about? (PDF)
  Sustainability Considerations in Biomass Harvesting (PDF)

(3) **Climate Change Tree Atlas**
The *Climate Change Tree Atlas* examines current distributions and modeled future-climate habitats for 134 individual tree species or combined species by geographic areas. U.S. Forest Service inventory data was used with 38 environmental variables to generate models of current suitable habitat for each species. For this atlas, each species was modeled individually to show current and potential future distributions according to two emissions scenarios (A1fi-high emissions on current trajectory and B1-reasonable energy conservation energy implemented) and three climate models: the Parallel Climate Model (PCM), the Hadley CM3 model (Hadley), and the Geophysical Fluid Dynamics Laboratory (GFDL) model.

Climate Change Tree Atlas

(4) **Climate Change Bird Atlas**
The Climate Change Bird Atlas assesses the current status and potential future status following climate change, of 147 bird species in the eastern United States. The Atlas used Breeding Bird Survey data with 11 environmental variables and 88 tree species potential change data to generate models of current suitable habitat for each species. For this atlas, each species was modeled individually to show current and potential future distributions according to two emissions scenarios (A1fi-high emissions on current trajectory and B1-reasonable energy conservation energy implemented) and three climate models: the Parallel Climate Model (PCM), the Hadley CM3 model (Hadley), and the Geophysical Fluid Dynamics Laboratory (GFDL) model.

Climate Change Bird Atlas

(5) **Climate Change Research in the US Forest Service**
http://www.fs.fed.us/pnw/pep/climatechange/

Index
- ReThinking Forest Management in the West
- Options for Natural Resource Management under a Changing Climate
- Climate Change, Uncertainty and Forecasts of Global to Landscape Ecosystem Dynamics
- Adapting to Climate Change in the Olympic National Forest
- Managing Super-Old-Growth in the Fourth Dimension
- Holocene Climate Variation and Drought in the Great Basic: Impacts on Past, Present, and Future Vegetation
US FISH AND WILDLIFE SERVICE

The mission of the US Fish and Wildlife Service is working with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people.

www.fws.gov

(1) **Conserving the Nature of America in a Changing Climate**
The Fish and Wildlife Service is monitoring our trust resources to see how they are affected by the changing climate.
http://www.fws.gov/home/climatechange/index.html

(2) **USFWS Regional Forums**
The Service is currently planning a series of regional forums to help collect information on the potential effects of climate change in coastal areas, mountains, prairies and other landscapes, and to identify ways we might better prepare for managing our valuable natural resources in the coming decades.

(3) **Service Programs**
In general, US Fish and Wildlife Service programs are already addressing climate change. Here are a few examples:

* **National Wildlife Refuge System**
The National Wildlife Refuge System is looking at their Comprehensive Conservation Plans – a plan required of every refuge – to consider climate change in future planning. The system is also looking at how projected sea level rise could affect selected coastal refuges and how wildfire could change as the result of a warming climate. This is particularly important since 177 refuges are on the coast.

* **Migratory Bird Program**
The Migratory Bird Program is currently examining how climate change will impact migratory birds. The program is considering ways to incorporate climate change influences into existing activities and identifying future actions that may be needed.

* **Endangered Species Program**
The Endangered Species Program’s largest need with regard to climate change is for specific scientific information related to species and habitat changes, as this information is essential in evaluating the status of species, including establishing baseline conditions. The Program will work in coordination with Federal scientists and other experts to support efforts to obtain such information. The Program also will develop interim guidance regarding
relevant aspects of ESA implementation involving climate change, with a focus on how to evaluate and include the best available scientific information on climate change information in the decision making process.

- **Fisheries Program**
  The [Fisheries Program](#) is expanding its efforts to monitor and assess fish populations and aquatic habitat to provide vital information for adaptive management and planning efforts. Information will be used to: identify sensitive ecosystems and critical processes; understand current conditions (including existing stressors); and provide information for management plans and actions.
  The National Fish Habitat Action Plan also may provide a model for future coordinated climate change efforts by identifying ways to include climate change more effectively NFHAP partnership projects.
  The Fisheries Program will continue its comprehensive efforts to detect and track emerging fish health issues through the National Wild Fish Health Survey, with assistance from State, Tribal, and other Federal partners. The National Fish Hatchery System also is well positioned to develop captive propagation techniques for aquatic species impacted by climate change. It will further focus on its role in recovery by providing refugia and rearing opportunities for restoration and recovery programs nationwide.

- **Habitat Conservation Program**
  The [Habitat Conservation](#) program has accelerated its coordination and collaboration with other agencies, tribes, and non-governmental organizations, to help promote development of renewable energy sources. The program employs strategic habitat conservation principles to provide landscape level conservation and planning assistance to abate the impacts of growth and development related to climate change and/or sea-level rise. Activities focus on ensuring habitat connectivity; mitigating the effects of climate change, such as flooding or storm surge; and coastal land protection and conservation.
  The program also is expanding partnerships with private landowners to increase opportunities for strategic habitat conservation and restoration.

- **Environmental Quality Program**
  The technical expertise of Environmental Contaminants biologists, toxicologists, and chemists is unique in the Service and will be of critical value in the face of increasingly complex environmental contaminant related threats to Service trust resources. The program assists in understanding predicted climate change impacts geographically and temporally by applying its capability for national level biotic monitoring, such as Abnormal Amphibian Monitoring Program. The EC program also has increased its involvement in pre-spill/contingency planning and preparedness as spill responders. These skills will become increasingly important as sea levels rise and climate fluctuates.
US NATIONAL PARK SERVICE
Established in 1916 to administer and protect the National Park system of the country as well as to help local groups in the protection of the natural environment and the preservation of historic places.
www.nps.gov

(1) Climate Friendly Parks
The Climate Friendly Parks (CFP) Program, a collaboration of the National Park Service and the U.S. Environmental Protection Agency, provides national parks with management tools and resources to address climate change. The program aims to provide national parks with comprehensive support to address climate change both within park boundaries and the surrounding community. The CFP program has developed an established framework for providing climate change support. This structure is based on providing the technical assistance, tools and resources for national parks to protect their natural and cultural resources and serve as models of climate friendly behavior. The program has a three-pronged approach: 1) measure park-based greenhouse gas (GHG) emissions, 2); develop sustainable strategies to mitigate these emissions and adapt to climate change impacts; and, 3) educate the public about these efforts. Over 40 national parks are currently participating in the Climate Friendly Parks Program.
http://www.nps.gov/climatefriendlyparks/

US ENVIRONMENTAL PROTECTION AGENCY (EPA)
The U.S. Environmental Protection Agency (EPA) is an agency of the federal government of the United States charged with protecting human health and safeguarding the natural environment: air, water, and land. The EPA leads the nation’s environmental science, research, education and assessment efforts.
www.epa.gov

(1) Climate Change
EPA's Climate Change Site offers comprehensive information on the issue of climate change in a way that is accessible and meaningful to all parts of society – communities, individuals, business, states and localities, and governments.
http://www.epa.gov/climatechange/

(2) EPA Greenhouse Gas Reduction Initiatives
EPA plays a significant role in helping the United States reach its intensity goal through near-term initiatives that encourage voluntary reductions from large corporations, consumers, industrial and commercial buildings and many major industrial sectors.
http://www.epa.gov/climatechange/policy/nearertermghgreduction.html

• Clean Energy-Environment State Partnership
The Clean Energy-Environment State Partnership Program is a voluntary state-federal partnership that encourages states to develop and implement cost-effective clean energy and environmental strategies. These strategies help
further both environmental and clean energy goals while achieving public health and economic benefits. Under the Partnership Program, states work across their relevant agencies to develop and implement a comprehensive strategy for using existing and new energy policies and programs to promote energy efficiency, clean distributed generation, renewable energy and other clean energy sources that can provide air quality and other benefits.

- **Climate Leaders**
  Climate Leaders is an EPA industry-government partnership that works with companies to develop comprehensive climate change strategies. Partner companies commit to reducing their impact on the global environment by setting aggressive greenhouse gas reduction goals. Through program participation, companies create a credible record of their accomplishments and receive EPA recognition as corporate environmental leaders. Climate Leaders Partners range from Fortune 100 corporations to small businesses and represent a variety of industries and sectors, from manufacturers and utilities to financial institutions and retailers, with operations in all 50 states.

- **Combined Heat and Power (CHP) Partnership**
  The CHP Partnership is a voluntary program to reduce the environmental impact of power generation by promoting the use of CHP. CHP is an efficient, clean and reliable approach to generating power and thermal energy from a single fuel source. The Partnership works closely with energy users, the CHP industry, state and local governments and other stakeholders to support the development of new projects and promote their energy, environmental and economic benefits.

- **ENERGY STAR**
  In 1992, EPA introduced ENERGY STAR as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. ENERGY STAR has been a joint EPA-Department of Energy program since 1996. Today more than 1,400 manufacturers use the ENERGY STAR in over 40 product categories. EPA also offers the ENERGY STAR partnership to businesses and organizations of all types and sizes including schools, hospitals, hotels, small businesses and congregations and to key industries such as auto manufacturing, petroleum refining and pharmaceuticals. ENERGY STAR delivers the technical information and tools that organizations and consumers need to choose energy-efficient solutions and best management practices. ENERGY STAR has successfully delivered energy and cost savings across the country, saving businesses, organizations and consumers approximately $10 billion in 2004. ENERGY STAR also has international partnerships intended to unify voluntary energy-efficiency labeling programs in major global markets and make it easier to participate in the program. See [http://www.energystar.gov](http://www.energystar.gov)

- **EPA Office of Transportation and Air Quality Voluntary Programs**
  Transportation and Air Quality voluntary programs aim to reduce pollution and improve air quality by means of forming partnerships with small and large businesses, citizen groups, industry, manufacturers, trade associations and
state and local governments. For example, in February 2004 EPA announced the **SmartWay Transport Partnership**. The Partnership is a collaborative voluntary program between EPA and the freight industry that will increase the energy efficiency and energy security of our country while significantly reducing air pollution and greenhouse gases. Additional transportation and air quality voluntary programs at EPA include: the Green Vehicle Guide, Voluntary Diesel Retrofit Program, Clean School Bus USA, Best Workplaces for Commuters and It All Adds Up to Cleaner Air.

**Green Power Partnership**

The **Green Power Partnership** is a voluntary partnership between EPA and organizations that are interested in buying green power. Green power is an environmentally friendly electricity product that is generated from renewable energy sources. Through this program, EPA supports organizations that are buying or planning to buy green power. As a Green Power partner, an organization pledges to replace a portion of its electricity consumption with green power within a year of joining the Partnership. EPA offers credible benchmarks for green power purchases, market information and opportunities for recognition and promotion of leading purchasers.

**High GWP Gas Voluntary Programs**

EPA has a set of voluntary industry partnerships that are substantially reducing U.S. emissions of high global warming potential (high GWP) gases. These synthetic gases - including perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulfur hexafluoride (SF6) - are manufactured for commercial use or generated as waste byproducts of industrial operations. Some of these gases have valuable uses as substitutes for ozone depleting substances. However, some species of these gases, while released in small quantities, are extremely potent greenhouse gases with very long atmospheric lifetimes. The **high GWP partnership programs** involve several industries, including HCFC-22 producers, primary aluminum smelters, semiconductor manufacturers, electric power companies and magnesium smelters and die-casters. These industries are reducing greenhouse gas emissions by developing and implementing cost-effective improvements to their industrial processes. To date, these voluntary programs have achieved significant emission reductions and industry partners are expected to maintain emissions below 1990 levels beyond the year 2010.

**Methane Voluntary Programs**

U.S. industries along with state and local governments collaborate with EPA to promote profitable opportunities for reducing emissions of methane, a potent greenhouse gas. These voluntary programs are designed to overcome a wide range of informational, technical and institutional barriers to reducing methane emissions, while creating profitable activities for the coal, natural gas, petroleum, landfill and agricultural industries. The collective results of EPA’s **voluntary methane partnership programs** have been substantial. Total U.S. methane emissions in 2003 were more than 10 percent lower than emissions in 1990, in spite of economic growth over that time period. EPA
expects that these programs will maintain emissions below 1990 levels in the future due to expanded industry participation and the continuing commitment of the participating companies to identify and implement cost-effective technologies and practices. Additionally, through our participation in the Methane to Markets Partnership, the U.S. is also working towards reducing international methane emissions. See http://www.methanetomarkets.org

- **WasteWise**
  WasteWise is a voluntary EPA program through which organizations eliminate costly municipal solid waste and select industrial wastes, benefiting their bottom line and reducing the amount of waste deposited in landfills. WasteWise is a flexible program that allows partners to design their own waste reduction programs tailored to their needs. Waste reduction can save organizations money through reduced purchasing and waste disposal costs. WasteWise provides free technical assistance to help organizations develop, implement and measure their waste reduction activities.

- **EPA’s Clean Energy Programs**
  EPA’s Clean Energy Programs are working with state policy makers, electric and gas utilities, energy customers, and other key stakeholders. By identifying, designing and implementing clean energy policy and technology solutions, we are delivering important environmental and economic benefits. See http://www.epa.gov/cleanenergy/

- **Landfill Methane Outreach Program (LMOP)**
  The U.S. EPA's Landfill Methane Outreach Program (LMOP) is a voluntary assistance and partnership program that promotes the use of landfill gas as a renewable, green energy source. Landfill gas is the natural by-product of the decomposition of solid waste in landfills and is comprised primarily of carbon dioxide and methane. By preventing emissions of methane (a powerful greenhouse gas) through the development of landfill gas energy projects, LMOP helps businesses, states, energy providers, and communities protect the environment and build a sustainable future. See http://www.epa.gov/lmop/

(3) **Non-CO2 Mitigation**
EPA collects data on international historical and projected greenhouse gas emissions and estimates the costs of reducing these emissions, and has issued several analytical reports on international emissions projections and mitigation opportunities for the non-CO2 greenhouse gases. EPA is currently addressing these key analytical issues in the following areas:
- Sources and current emissions of non-CO2 gases
- Future projections of non-CO2 greenhouse gases in the United States
- International estimates of emissions, projections, and mitigation costs
  http://www.epa.gov/climatechange/economics/mitigation.html

- **Greenhouse Gas Mitigation Potential in U.S. Forestry and Agriculture**
  This technical report examines different future scenarios for sequestering carbon and reducing emissions of methane (CH4) and nitrous oxide (N2O) from U.S. forestry and agriculture. Net greenhouse gas mitigation estimates in
response to carbon price assumptions are presented for the period 2010 - 2110 (with a focus on 2015, 2025 and 2055), using a model of the U.S. forestry and agricultural sectors called FASOMGHG.

Greenhouse Gas Mitigation Potential in U.S. Forestry and Agriculture (PDF)

(4) **Climate Change Science Program**
The Climate Change Science Program (CCSP) is one of the largest components of the U.S. climate program. CCSP is a multi-agency effort focused on improving our understanding of the science of climate change and its potential impacts. The CCSP integrates federal research on climate and global change, as sponsored by thirteen federal agencies and overseen by the Office of Science and Technology Policy, the Council on Environmental Quality, the National Economic Council and the Office of Management and Budget.

[www.climatescience.gov](http://www.climatescience.gov)

- **EPA's Global Change Research Program**
  EPA's Global Change Research Program is an assessment-oriented program with primary emphasis on understanding the potential consequences of climate variability and change on human health, ecosystems and socioeconomic systems in the United States. The planning and implementation of EPA’s climate research and assessment activities are closely coordinated with the U.S. Climate Change Science Program (CCSP). The website is designed to provide a portal through which scientists, resource managers, and the public can access information about the program and partners.

[http://www.epa.gov/globalresearch/](http://www.epa.gov/globalresearch/)

(5) **Climate Change Technology Program**
The Climate Change Technology Program (CCTP) is a multi-agency, planning and coordination entity that assists the government in carrying out the President's National Climate Change Technology Initiative. It is managed by the Department of Energy and organized around five technology areas for which working groups have been established. EPA participates in all of the working groups and chairs the group focused on reducing emissions of non-CO2 greenhouse gases.

[www.climatetechnology.gov](http://www.climatetechnology.gov)

(6) **National Water Program Strategy: Response to Climate Change**
The U.S. Environmental Protection Agency’s Office of Water solicited comment on a public review draft of the National Water Program Strategy: Response to Climate Change through June 10, 2008. This draft document represents the National Water Program’s initial effort to identify potential impacts of climate change for clean water and drinking water programs and define actions to respond to these impacts. A March 28, 2008, memorandum signed by the Assistant Administrator for Water requested comments on the draft strategy.

[PUBLIC REVIEW DRAFT National Water Program Strategy: Response to Climate Change – March 2008 (PDF)](http://www.epa.gov/)

101
• **Climate Change and the National Water Program – Background Information**

A March 1, 2007, memorandum signed by the Assistant Administrator for Water describes the general principles to guide the National Water Program in responding to climate change, proposes the development of a National Water Program strategy on climate change, and announces the formation of a National Water Program Climate Change Workgroup.

*Climate Change and the National Water Program* – Benjamin H. Grumbles – March 1, 2007 (PDF)
APPENDIX A
CLIMATE CHANGE ADAPTATION AND
MITIGATION PROGRAMS
Appendix A: Climate Change Adaptation and Mitigation Programs

CLIMATE ACTION NETWORK
The Climate Action Network (CAN) is a worldwide network of over 430 Non-Governmental Organizations (NGOs) working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels. http://www.climatenetwork.org/

(1) CAN-International
The Climate Action Network (CAN) is a worldwide network of over 365 Non-Governmental Organizations (NGOs) working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels. CAN members work to achieve this goal through the coordination of information exchange and NGO strategy on international, regional and national climate issues. CAN has seven regional offices which co-ordinate these efforts in Africa, Central and Eastern Europe, Europe, Latin America, North America, South Asia, and Southeast Asia. CAN members place a high priority on both a healthy environment and development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission). Climate Action Network's vision is to protect the atmosphere while allowing for sustainable and equitable development worldwide.

(2) CAN’s Three Track Approach
The Climate Action Network promotes a parallel three track approach to mitigating climate change which includes a Kyoto track, a ‘Greening’ (decarbonisation) track, and an Adaptation track. The goal of this approach is to facilitate action that will prevent harmful climate change and keep global warming as far below 2°C as possible.

- **The Kyoto Track**
  The Kyoto track utilizes the legally binding instruments of the UNFCCC and the Kyoto Protocol to drive greenhouse gas emissions reductions. The Kyoto Protocol contains mandatory provisions for the reduction of greenhouse gases by Annex I (industrialized) countries. Obligatory, dated targets, emissions trading programs, and compliance mechanisms are vital components of the Protocol. In accordance with principles of historical responsibility and equity, only industrialized countries will be subject to these commitments. However, as developing countries industrialize, they will come under the purview of the Protocol’s mandatory provisions. The Kyoto track will spur the rapid development of sustainable technologies by industrialized countries, which will then be transferred to developing countries in the ‘Greening’ track.

- **The "Greening" Track**
The ‘Greening’ (decarbonisation) track involves the rapid introduction of clean, sustainable technologies to developing countries in order that they may reduce their current emissions and follow a low carbon path to development. The ability of these countries to develop in a sustainable way is largely
dependent on the provision of technical and other assistance from industrialized countries. The ‘Greening’ track applies to all developing countries except the least developed countries (LDCs), whose emissions are negligible, though they will be provided incentives to participate if they so desire. The emissions reduction and clean development goals will vary according to the capacity of individual developing countries.

- **The Adaptation Track**
  The Adaptation track is designed to assist the most vulnerable countries (small island states and LDCs) in anticipating and limiting the unavoidable effects of climate change. Industrialized countries bear the responsibility of providing assistance to these countries and, in the case that some consequences of climate change cannot be mitigated, the responsibility of compensation. Countries that receive assistance in the Adaptation track may also participate in the other tracks if their circumstances permit.

- **Historical Responsibility**
  This three track system is based on the principle of historical responsibility: industrialized countries, because they have contributed the majority of greenhouse gases that are now causing climate change and have benefited most from their exploitation of this global public good, have the obligation to act first to reduce their emissions. The system also operates on the equity principle which posits that all countries have equal access to atmospheric commons, including future generations, and that developing countries be given the opportunity to industrialize. Accordingly, rights and obligations are differentially assigned according to level of development.

(3) **Climate Action Network (USCAN)**
U.S. Climate Action Network (USCAN) is an affiliate network of the Climate Action Network (CAN), a worldwide network of over 365 Non-Governmental Organizations (NGOs) from 85 countries working to promote government, private sector and individual action to limit human-induced climate change to ecologically sustainable levels. CAN's mission is to support and empower civil society organizations to influence the design and development of an effective global strategy to reduce greenhouse gas emissions and ensure its implementation at international, national and local levels in the promotion of equity and sustainable development. USCAN includes a broad cross-section of advocates, with members from environmental, faith, student, environmental justice and local government organizations. USCAN plays a critical role in connecting groups working at all levels to set common priorities and ensure coordinated constituency outreach, corporate engagement, policy advocacy, and media outreach.


- **USCAN Mission Statement**
The overall goal of the US Climate Action Network (USCAN) is to promote government, corporate, community and individual action to limit global warming to ecologically sustainable levels.
• **USCAN Objectives**
In pursuit of its goal to promote their mission, the objectives of USCAN are:
- To facilitate collaborative action by USCAN members, members of the international Climate Action Network, and other organizations to promote effective solutions to the threat of global warming.
- To formulate policy options and, whenever possible, joint positions and advocacy strategies on global warming policy issues.
- To promote substantial reductions in domestic greenhouse gas emissions at the federal, state, and local level needed to avoid dangerous climate change.
- To support the strengthening of multilateral efforts and commitments by countries to reduce greenhouse gas emissions, particularly within the United Nations Framework Convention on Climate Change and the Kyoto Protocol.

**U.S. CLIMATE CHANGE SCIENCE PROGRAM**
The Climate Change Science Program (CCSP) was established in 2002 to provide the Nation with science-based knowledge to manage the risks and opportunities of changes in the climate and related environmental systems. The CCSP integrates federal research on climate and global change, as sponsored by thirteen federal agencies and overseen by the Office of Science and Technology Policy, the Council on Environmental Quality, the National Economic Council and the Office of Management and Budget. The CCSP incorporates and integrates the U.S. Global Change Research Program (USGCRP) with the Administration’s U.S. Climate Change Research Initiative (CCRI).

http://www.climatescience.gov/

(1) **Overview**
- **CCSP Vision**
  The CCSP vision is a nation and the global community empowered with the science-based knowledge to manage the risks and opportunities of change in the climate and related environmental systems.
- **CCSP Mission**
  The CCSP mission is to facilitate the creation and application of knowledge of the Earth's global environment through research, observations, decision support, and communication.
- **CCSP Goals**
  The U.S. Climate Change Science Program has five goals:
  1. Improve knowledge of the Earth’s past and present climate and environment, including its natural variability, and improve understanding of the causes of observed variability and change.
  2. Improve quantification of the forces bringing about changes in the Earth's climate and related systems.
  3. Reduce uncertainty in projections of how the Earth’s climate and related systems may change in the future.
4. Understand the sensitivity and adaptability of different natural and managed ecosystems and human systems to climate and related global changes.

5. Explore the uses and identify the limits of evolving knowledge to manage risks and opportunities related to climate variability and change.

• **Core Approaches**
  The U.S. Climate Change Science Program has four core approaches:
  
  **Scientific Research:** Plan, sponsor, and conduct research on changes in climate and related systems.
  
  **Observations:** Enhance observations and data management systems to generate a comprehensive set of variables needed for climate-related research.
  
  **Decision Support:** Develop improved science-based resources to aid decisionmaking.
  
  **Communications:** Communicate results to domestic and international scientific and stakeholder communities, stressing openness and transparency.

• **Research Elements**
  
  – Atmospheric Composition
  – Climate Variability and Change
  – Global Water Cycle
  – Land-Use and Land-Cover Change
  – Global Carbon Cycle
  – Ecosystems
  – Decision-Support Resources Development and Related Research on Human Contributions and Responses
  – Observing and Monitoring the Climate System
  – Communications
  – International Research and Cooperation

(2) **Synthesis and Assessment Product Reports**

The CCSP Strategic Plan calls for the creation of a series of 21 synthesis and assessment products (SAPs) with the intent of providing decision support information for policymakers, resources managers, stakeholders, the media, and the general public. The Synthesis and Assessment Product Reports address various aspects of climate change. There are Guidelines for Producing CCSP Synthesis and Assessment Products to ensure adherence to the general principles set forth by the CCSP Strategic Plan.

Synthesis and Assessment Product Library

• **Highlighted Report: “Preliminary Review of Adaptation Options for Climate-sensitive Ecosystems and Resources”**

The U.S. Environmental Protection Agency has released a report that can help reduce the potential impact of climate change on estuaries, forests, wetlands, coral reefs, and other sensitive ecosystems. The report, entitled Preliminary Review of Adaptation Options for Climate-Sensitive Ecosystems and Resources, identifies strategies to protect the environment as these changes
occur. The report finds that climate change can increase the impact of traditional stressors (such as pollution or habitat destruction) on ecosystems, and that many existing best management practices to reduce these stressors can also be applied to reduce the impacts of climate change. The peer-reviewed report provides the best-available science to date on management adaptations for ecosystems and resources. It was developed following the guidelines developed by the U.S. Climate Change Science Program. The Global Change Research Program in EPA’s Office of Research and Development led the development of the report. It is one of 21 synthesis and assessment products commissioned by the CCSP.

Final Report (PDF)
Findings, Summary, & FAQs Brochure (PDF)

CLIMATE, COMMUNITY AND BIODIVERSITY ALLIANCE
The Climate, Community and Biodiversity Alliance (CCBA) is a partnership between leading companies, NGOs and research institutes seeking to promote integrated solutions to land management around the world. With this goal in mind, the CCBA has developed voluntary standards to help design and identify land management projects that simultaneously minimize climate change, support sustainable development and conserve biodiversity.

http://www.climate-standards.org/

1. CCBA Mission
Climate, Community and Biodiversity Alliance (CCBA) has developed and is promoting rigorous standards for evaluating land-based carbon projects. The CCB Standards identify land-based climate change mitigation projects that simultaneously generate climate, biodiversity and sustainable-development benefits.

• Goals
The two goals of the CCBA have been to:
– Develop standards that evaluate climate, community and biodiversity impacts of land-based climate change mitigation projects.
– Promote the CCB Standards as a credible means for identifying projects that simultaneously counter multiple global problems. The CCB encourages carbon project developers to use the standards when designing, developing and implementing projects. CCB Standards certification can help projects garner international credibility and locate additional support and resources. In conjunction, the CCBA encourages governments, investors, carbon portfolios, development agencies and private entities to support projects that meet the standards.

2. CCB Standards
The Climate, Community and Biodiversity Project Design Standards (CCB Standards) evaluate land-based carbon mitigation projects in the early stages of development. The CCB Standards foster the integration of best-practice and multiple-benefit approaches into project design and evolution. The CCB
Standards identify land-based projects that can simultaneously deliver compelling climate, biodiversity and community benefits. The Standards additionally promote excellence and innovation in project design and mitigate risk for investors and increase funding opportunities for project developers.  

Standards [PDF]

3. Projects
Currently, several dozen land-based projects around the world are using the CCB Standards to improve project design and ensure they will generate compelling climate, community and biodiversity benefits. Over time, it is expected that most of these projects will seek independent verification to prove that they meet the CCB Standards. 

Projects [Webpage]

FOREST CARBON PARTNERSHIP FACILITY
The Forest Carbon Partnership Facility (FCPF) is the proposed framework by the World Bank to respond to developing and industrialized countries requests for piloting activities that would reduce emissions from deforestation and degradation using a system of policy approaches and performance-based payments. 

FCPF [Webpage]

Overview of the Forest Carbon Partnership Facility
The proposed Forest Carbon Partnership Facility (FCPF) would assist developing countries in their efforts to reduce emissions from deforestation and land degradation (REDD) by providing value to standing forests. It would have the dual objectives of building capacity for REDD in developing countries, and testing a program of performance-based incentive payments in some pilot countries, on a relatively small scale, in order to set the stage for a much larger system of positive incentives and financing flows in the future.

Mechanisms to Support FCPF Objectives
Two separate mechanisms would be set up to support FCPF objectives:

1. Readiness Mechanism: the Facility would help about 20 interested developing countries to arrive at a credible estimate of their national forest carbon stocks and sources of forest emissions, as well as assist the country in defining their reference scenario based on past emission rates for future emissions estimates. The Readiness Mechanism would offer these countries technical assistance in calculating opportunity costs of possible REDD interventions, and designing an adapted REDD strategy that takes into account country priorities and constraints.

2. Carbon Finance Mechanism: few countries would be selected to participate in this mechanism through which the Facility would implement and evaluate pilot incentive programs for REDD based on a system of compensated reductions. The selected countries, having: (a.) demonstrated ownership on REDD and adequate monitoring capacity; and (b.) established a credible reference scenario and options for
reducing emissions; would receive payments for reducing emissions below the reference scenario. The structure of these incentive payments would build on the options for REDD that are currently being discussed within the United Nations Framework Convention on Climate Change (UNFCCC) process, with payments made to help address the causes of deforestation and degradation. Within the Carbon Finance Mechanism, payments would only be made to countries that achieve measurable and verifiable emission reductions. Together, these two mechanisms would seek to help to learn lessons from first-of-a-kind operations and develop a realistic and cost-effective large new instrument for tackling deforestation, to help safeguard the Earth's climate, reduce poverty, manage freshwater resources, and protect biodiversity. However, it is important to note that the Facility itself would not be a panacea to "save the world's forests." Rather, it seeks to create an enabling environment and garner a body of knowledge and experiences that can facilitate development of a much larger global program of incentives for REDD over the medium term (5-10 years). The targeted volume of the facility would be approximately US$ 300 million.

SUSTAINABLE FORESTRY INITIATIVE
The Sustainable Forestry Initiative (SFI) program is a comprehensive system of principles, objectives and performance measures developed by professional foresters, conservationists and scientists, among others that combines the perpetual growing and harvesting of trees with the long-term protection of wildlife, plants, soil and water quality. The SFI program is based on the premise that responsible environmental behavior and sound business decisions can co-exist to the benefit of landowners, manufacturers, shareholders, customers, the people they serve, the environment, and future generations.

http://www.sfiprogram.org/

(1) **Sustainable Forestry Initiative (SFI) Program**
The SFI program is now fully independent. On January 1, 2007, a new, fully independent organization, the Sustainable Forestry Initiative, Inc. (SFI, Inc.) was created to direct all elements of the SFI® program. This independence solidifies the SFI program’s strong market position as one of the world’s leading forest certification programs. In order to be certified, an SFI program participant must undergo a thorough and rigorous review of its operations by an audit firm that has been accredited by either the American National Standards Institute (ANSI) or the Standards Council of Canada.

* **SFI Standard**
The SFI Standard (SFIS) is the document that spells out the strict and comprehensive SFI program compliance requirements. The SFIS is based on nine principles that address economic, environmental, cultural and legal
issues, in addition to a commitment to continuously improve sustainable forest management. The current SFIS is valid from 2005 through 2009.

SFI Standard 2005-2009 (PDF)
Interpretations associated with the 2005-2009 SFIS (PDF)

- **SFI Chain of Custody**
  Chain of custody (CoC) is the process of tracking and recording the possession and transfer of wood and fiber from the forests of origin through the different stages of production—primary manufacturing, secondary manufacturing, wholesaling, and retailing—to the end user. Companies interested in demonstrating that their products are made from responsibly managed forests, and not from areas that were illegally harvested, major tropical wilderness areas, or biodiversity hotspots need SFI® CoC certification.

  SFI Chain of Custody Certifications (PDF)
  Requirements for fiber sourcing, chain of custody and product labels (PDF)
  Interpretations and FAQs (PDF)

- **SFI Label**
  The SFI program has two on-product label types:
  1. **Percent Certified Content Labels (Chain of Custody)**
     The SFI program has four distinct percent certified content labels and also provides an additional claim regarding recovered fiber content. Certification to the SFI Chain of Custody Standard is required for SFI program participants to use any of the percent content labels.
     - **100% Certified Content Label:** Manufacturer must demonstrate that 100% of the raw material use in the product comes directly from a forest certified to SFIS or the Canadian Standards Association’s (CSA) standards.
     - **X% Certified Content Label:** Manufacturer must demonstrate that a specified percentage of raw material in its product or production line comes directly from a forest certified by SFI or CSA standards.
     - **Volume Credit Label:** Manufacturer must demonstrate the percentage of raw material in its product or production line comes directly from a forest certified to SFI or CSA Standards. The volume credit method requires that the portion of products will be proportionate to the percentage of certified content and will be considered as including 100% of certified raw material.
     - **100% Recovered Fiber Label:** Manufacturer must demonstrate that 100% of the raw material used in the product comes from recovered wood fiber.
     - **X Percent Recovered Fiber Claim:** Manufacturer must demonstrate that a specific percentage of the raw material used in the product or production line is recovered wood fiber. This is not a stand-alone
label. The manufacturer must first qualify for one of the (non-
100% certified content) labels.

2. **Fiber Sourcing Labels**

   The SFI Standard requires participants to employ an auditable system
to characterize the forest practices on the lands where they procure raw
material. This is done by auditing the on-the-ground practices for a
portion of the wood that is supplied to their processing facilities. The
program emphasizes reforestation, the utilization of best management
practices and enhancing the professional capacity of wood production
operations. The SFI labeling program also recognizes landowners
certified under the American Tree Farm System® and Canadian
Standards Association (CSA) programs, who supply raw materials to
SFI program participants as a source equivalent to forests certified
under the SFI program for fiber sourcing labels. In addition to the
procurement system, the SFI Standard requires participants to support
various training and education programs, all of which is designed to
assist landowners in improving their capacity to practice sustainable
forestry on all types of forest lands.

- **Pilot Programs**

  SFI, Inc is responsible for meeting the goal of continual improvement of the
content and implementation of the SFI Standard. While most of these efforts
occur during the 5-year review of the SFI Standard, sometimes issues must be
explored during the period in between review cycles. Since the last review in
2004, SFI, Inc has been working on a number of pilot projects. The goal of
these projects is to establish baseline information that will guide future
Standard reviews in order to ensure that the content of the SFIS is
accomplishing SFM on the ground. SFI Inc also works with its conservation
supporters to identify areas of common interest for collaboration. SFI, Inc
may partner on a project with an outside organization on a project that
benefits the program. These projects are evaluated on a case by case basis.
Last, SFI, Inc will also appoint task forces to work on specific issues of
concern to the Standard or certificate holders.

**SFI Pilot Projects:**

1. **Economics of SFI Certification**
   
   Goal: To determine benefits and costs of SFI Certification
   
   Status: Completed.
   
   Final Report (PDF)

2. **Alliance for Zero Extinction (AZE) Last Known Sites for Vertebrate Species**
   
   Goal: To assess AZE’s database of last known sites for vertebrate
   species for inclusion in the SFI Standard. If added, the sites would be
   considered as protected under the SFI Standard.
   
   Status: Pending Board approval for inclusion in the Standard
3. **Landscape Assessments**
   Goal: To assess the effects of encouraging cross boundary landscape management under the SFI Standard Objective
   Status: In progress, expected completion date, mid 2008

4. **Conservation Planning**
   Goal: To aid certified companies in understanding and implementing the results of credible regional conservation plans
   Status: In progress, expected completion date mid 2008

**CARBON MITIGATION INITIATIVE**
The Carbon Mitigation Initiative (CMI) is a joint project of Princeton University, BP and the Ford Motor Company to find solutions to the greenhouse and global warming problem. Together researchers are developing strategies to reduce global carbon dioxide emissions that will be safe, effective, and affordable. The Carbon Mitigation Initiative is a part of the Princeton Environmental Institute.

[www.princeton.edu/~cmi](http://www.princeton.edu/~cmi)

(1) **Carbon Mitigation Initiative (CMI)**
The mission of the Carbon Mitigation Initiative is to find a solution to the greenhouse gas problem. Researchers work on identifying the most credible methods of capturing and sequestering a large fraction of carbon emissions from fossil fuels, in order to establish which, if any, of these methods: will have the desired effect on atmospheric carbon and climate; will be safe and reliable, with minimal negative environmental impact; or will involve neither prohibitive economic costs nor prohibitive disruption of patterns of energy consumption. CMI focuses on resolving the fundamental scientific, environmental, and technological issues that are likely to influence public acceptance of any proposed solution.


**Research Groups:**
- **The Capture Group**
  The Capture Group assesses the potential of low-carbon energy technologies. CMI’s Capture Group is seeking ways to speed that change by making low-carbon energy technologies more cost-effective.

- **The Storage Group**
  The Storage Group studies the feasibility of long-term underground carbon storage. The Storage Group is assessing the safety and effectiveness of one promising storage strategy—injecting CO2 into saline aquifers deep underground.

- **The Science Group**
  The Science Group examines the impacts of CO2 on climate and the carbon cycle. CMI’s science group is increasing understanding of the carbon cycle by combining observations of the earth system’s present and past behavior with computer simulations of the future.
The Integration Group

The Integration Group analyzes possible pathways for carbon mitigation. The Integration Group works to synthesize research discoveries and explore the real-world implications of carbon mitigation strategies.
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**Association of Zoos and Aquariums**

**Atlantic Centre for the Environment**

**California Institute of Public Affairs**


**Center for Biodiversity and Conservation, American Museum of Natural History (NY)**


**Center for Environmental Legal Studies**


**Center for Humans and Nature, NFP**


**Center for International Environmental Law**


Cheyenne Mountain Zoological Park

Environmental Defense Fund


Environmental Law Institute


Foundation for Environmental Security and Sustainability


George Wright Society

Global Land Cover Facility, University of Maryland


Khaled Bin Sultan Living Oceans Foundation


Los Angeles Zoo


Marine Conservation Biology Institute

National Audubon Society


National Parks Conservation Association


National Wildlife Federation


Natural Heritage Institute


Natural Resources Defense Council


Primarily Primates
Reef Check Foundation

Smithsonian Institution


Snow Leopard Trust
St. Louis Zoological Park


The Heinz Center


The Nature Conservancy


World Wildlife Fund – US


WorldWatch Institute


Zoological Society of San Diego


Antarctic and Southern Ocean Coalition


Conservation International


Counterpart International, Inc.


Ecoagriculture Partners


Forest Trends


International Association of Fish and Wildlife Agencies

International Indian Treaty Council


International Primate Protection League
International Species Information System
National Geographic Society


NatureServe
Pacific Seabird Group

Rainforest Alliance

Rare
Sierra Club


Societas Internationalis Limnologiae Theoreticae et Applicatae
Society for Conservation Biology

Society for Ecological Restoration International

Wild Salmon Center

Wildlife Trust

World Environment Center

Woodland Park Zoological Society

US Department of State, Bureau of Oceans and International Environmental and Scientific Affairs

National Oceanic and Atmospheric Administration, US Department of Commerce

US Agency for International Development

US Department of Agriculture - Forest Service


US Department of the Interior (Fish and Wildlife Service)


US Environmental Protection Agency


Climate Action Network


U.S. Climate Change Science Program


Climate, Community and Biodiversity Alliance


Forest Carbon Partnership Facility


Sustainable Forestry Initiative


Carbon Mitigation Initiative


The Integration Group <http://www.princeton.edu/~cmi/research/Integration/integration.shtml>