

## The Brisbane Declaration

### ***Environmental Flows<sup>1</sup> are Essential for Freshwater Ecosystem Health and Human Well-Being***

This declaration presents summary findings and a global action agenda that address the urgent need to protect rivers globally, as proclaimed at the 10<sup>th</sup> International Rivers *symposium* and International Environmental Flows Conference, held in Brisbane, Australia, on 3-6 September 2007. The conference was attended by more than 800 scientists, economists, engineers, resource managers and policy makers from 57 nations. Key findings include:

**Freshwater ecosystems are the foundation of our social, cultural, and economic well-being.** Healthy freshwater ecosystems – rivers, lakes, floodplains, wetlands, and estuaries – provide clean water, food, fiber, energy and many other benefits that support economies and livelihoods around the world. They are essential to human health and well-being.

**Freshwater ecosystems are seriously impaired and continue to degrade at alarming rates.** Aquatic species are declining more rapidly than terrestrial and marine species. As freshwater ecosystems degrade, human communities lose important social, cultural, and economic benefits; estuaries lose productivity; invasive plants and animals flourish; and the natural resilience of rivers, lakes, wetlands, and estuaries weaken. The severe cumulative impact is global in scope.

**Water flowing to the sea is *not* wasted.** Fresh water that flows into the ocean nourishes estuaries, which provide abundant food supplies, buffer infrastructure against storms and tidal surges, and dilute and evacuate pollutants.

**Flow alteration imperils freshwater and estuarine ecosystems.** These ecosystems have evolved with, and depend upon, naturally variable flows of high-quality fresh water. Greater attention to environmental flow needs must be exercised when attempting to manage floods; supply water to cities, farms, and industries; generate power; and facilitate navigation, recreation, and drainage.

**Environmental flow management provides the water flows needed to sustain freshwater and estuarine ecosystems in coexistence with agriculture, industry, and cities.** The goal of environmental flow management is to restore and maintain the socially-valued benefits of healthy, resilient freshwater ecosystems through participatory decision-making informed by sound science. Ground-water and floodplain management are integral to environmental flow management.

**Climate change intensifies the urgency.** Sound environmental flow management hedges against potentially serious and irreversible damage to freshwater ecosystems from climate change impacts by maintaining and enhancing ecosystem resiliency.

**Progress has been made, but much more attention is needed.** Several governments have instituted innovative water policies that explicitly recognize environmental flow needs. Environmental flow needs are increasingly being considered in water infrastructure development and are being maintained or restored through releases of water from dams, limitations on ground-water and surface-water diversions, and management of land-use practices. Even so, the progress made to date falls far short of the global effort needed to sustain healthy freshwater ecosystems and the economies, livelihoods, and human well-being that depend upon them.

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<sup>1</sup> *Environmental flows* describe the quantity, timing, and quality of water flows required to sustain freshwater and estuarine ecosystems and the human livelihoods and well-being that depend on these ecosystems.

## Global Action Agenda

The delegates to the 10<sup>th</sup> International Rivers *symposium* and Environmental Flows Conference call upon all governments, development banks, donors, river basin organizations, water and energy associations, multilateral and bilateral institutions, community-based organizations, research institutions, and the private sector across the globe to commit to the following actions for restoring and maintaining environmental flows:

**Estimate environmental flow needs everywhere immediately.** Environmental flow needs are currently unknown for the vast majority of freshwater and estuarine ecosystems. Scientifically credible methodologies quantify the variable – not just minimum – flows needed for each water body by *explicitly* linking environmental flows to specific ecological functions and social values. Recent advances enable rapid, region-wide, scientifically credible environmental flow assessments.

**Integrate environmental flow management into every aspect of land and water management.** Environmental flow assessment and management should be a basic requirement of Integrated Water Resource Management (IWRM); environmental impact assessment (EIA); strategic environmental assessment (SEA); infrastructure and industrial development and certification; and land-use, water-use, and energy-production strategies.

**Establish institutional frameworks.** Consistent integration of environmental flows into land and water management requires laws, regulations, policies and programs that: (1) recognize environmental flows as integral to sustainable water management, (2) establish precautionary limits on allowable depletions and alterations of natural flow, (3) treat ground water and surface water as a single hydrologic resource, and (4) maintain environmental flows across political boundaries.

**Integrate water quality management.** Minimizing and treating wastewater reduces the need to maintain un-naturally high streamflow for dilution purposes. Properly-treated wastewater discharges can be an important source of water for meeting environmental flow needs.

**Actively engage all stakeholders.** Effective environmental flow management involves all potentially affected parties and relevant stakeholders and considers the full range of human needs and values tied to freshwater ecosystems. Stakeholders suffering losses of ecosystem service benefits should be identified and properly compensated in development schemes.

**Implement and enforce environmental flow standards.** Expressly limit the depletion and alteration of natural water flows according to physical and legal availability, and accounting for environmental flow needs. Where these needs are uncertain, apply the precautionary principle and base flow standards on best available knowledge. Where flows are already highly altered, utilize management strategies, including water trading, conservation, floodplain restoration, and dam re-operation, to restore environmental flows to appropriate levels.

**Identify and conserve a global network of free-flowing rivers.** Dams and dry reaches of rivers prevent fish migration and sediment transport, physically limiting the benefits of environmental flows. Protecting high-value river systems from development ensures that environmental flows and hydrological connectivity are maintained from river headwaters to mouths. It is far less costly and more effective to protect ecosystems from degradation than to restore them.

**Build capacity.** Train experts to scientifically assess environmental flow needs. Empower local communities to participate effectively in water management and policy-making. Improve engineering expertise to incorporate environmental flow management in sustainable water supply, flood management, and hydropower generation.

**Learn by doing.** Routinely monitor relationships between flow alteration and ecological response before and during environmental flow management, and refine flow provisions accordingly. Present results to all stakeholders and to the global community of environmental flow practitioners.

**Delegates to the 10<sup>th</sup> International Riversymposium and International Environmental Flows Conference, held in Brisbane, Australia, on 3-6 September 2007, represented the following organizations, governments and institutions:**

Abare, AUSTRALIA  
 Academy of Natural Sciences, USA  
 Adelaide & Mount Lofty Ranges Natural Resources Management Board, AUSTRALIA  
 Aga Khan Development Network (AKDN), PAKISTAN  
 Agricultural Science & Technology Research Institute, KOREA  
 Agriculture University, INDIA  
 Anadolu University, TURKEY  
 ARI, Department Of Sustainability & Environment, AUSTRALIA  
 Arkansas State University, USA  
 Asian Development Bank, NETHERLANDS  
 Association for Water & Rural Development, SOUTH AFRICA  
 Australian Agency For International Development (AusAID), AUSTRALIA  
 Australian Government, AUSTRALIA  
 Australian National University, AUSTRALIA  
 Australian River Restoration Centre, AUSTRALIA  
 Australian Rivers Institute, Griffith University, AUSTRALIA  
 Australian Water Association, AUSTRALIA  
 Australian Water Quality Centre, AUSTRALIA  
 AWARD, SOUTH AFRICA  
 AWMC, AUSTRALIA  
 B4C Bulimba Creek Catchment Coordinating Committee, AUSTRALIA  
 Bangladesh University of Engineering & Technology, BANGLADESH  
 Bayside Creek Catchment, AUSTRALIA  
 Beijing Normal University, CHINA  
 Blackwood Basin Group, AUSTRALIA  
 BPA Environment, Fish & Wildlife, USA  
 Brisbane City Council, AUSTRALIA  
 Brisbane Water, AUSTRALIA  
 Bureau of Land Management, USA  
 Bureau of Meteorology, AUSTRALIA  
 Canegrowers, AUSTRALIA  
 Cape Action for People & the Environment (C.A.P.E), SOUTH AFRICA  
 Cape to Cape Catchments Group, AUSTRALIA  
 Cardwell Shire River Improvement Trust, AUSTRALIA  
 CDM, USA  
 CEA, CHILE  
 Central Queensland University, AUSTRALIA  
 Central Research Institute for Complex Use of Water Resources, BELARUS  
 Central West Catchment Management Authority, AUSTRALIA  
 Centre for Ecology & Hydrology, UK  
 Centre for Environmental Management, SOUTH AFRICA  
 Centre for Public Awareness of Science, ANU, AUSTRALIA  
 Centro de Ciencias de Sinaloa, MEXICO  
 Centro de Estudios Ambientales (CEDEA), ARGENTINA  
 Charity Organisation for Environmental Research, CAMEROON  
 Charles Darwin University, AUSTRALIA  
 Charles Sturt University, AUSTRALIA  
 Chinchilla Shire Council, AUSTRALIA  
 Chittering Landcare Centre, AUSTRALIA  
 City of New York Dept of Parks & Recreation, USA  
 Clark Fork Coalition, USA  
 Cochin University of Science & Technology, INDIA  
 Colorado State University, USA  
 Condamine Balonne Water Committee, AUSTRALIA  
 Connell Wagner, AUSTRALIA  
 Conservation Council of Western Australia, AUSTRALIA  
 Conservation International, USA  
 Conservation Volunteers Australia, AUSTRALIA  
 Corangamite CMA, AUSTRALIA  
 Corvinus University of Budapest, HUNGARY  
 CRC for Water Quality & Treatment, AUSTRALIA  
 CRC IF, AUSTRALIA  
 CSIRO, AUSTRALIA  
 CSIRO Land & Water, AUSTRALIA  
 CSIRO Mathematical & Information Sciences, AUSTRALIA  
 CSIRO Sustainable Ecosystems, AUSTRALIA  
 Cubberla-Witton Catchments Network, AUSTRALIA  
 Culture and Environment Preservation Association, CAMBODIA  
 Daly River Aboriginal Reference Group, AUSTRALIA  
 Dawson Catchment Coordinating Association Inc, AUSTRALIA  
 Department of Conservation, NEW ZEALAND  
 Department of Ecology, Washington, USA  
 Department of Environment & Climate Change, AUSTRALIA

Department of Environment & Heritage, AUSTRALIA  
 Department of Environment & Water, AUSTRALIA  
 Department of Natural Resources & Water, AUSTRALIA  
 Department of Primary Industries & Fisheries, AUSTRALIA  
 Department of Primary Industries & Water, AUSTRALIA  
 Department of Primary Industries, Water & Resources Policy Branch, AUSTRALIA  
 Department of Sustainability & Environment, AUSTRALIA  
 Department of the Environment & Water Resources, AUSTRALIA  
 Department of Water & Energy, AUSTRALIA  
 Department of Water Affairs & Forestry, SOUTH AFRICA  
 Department of Water, Land & Biodiversity Conservation, AUSTRALIA  
 Deschutes River Conservancy, USA  
 DHI Software, DENMARK  
 DHI Water & Environment, AUSTRALIA  
 Disaster Prevention Research Institute, JAPAN  
 Division of Water Resources, Ministry of Mines & Energy, SOLOMON ISLANDS  
 East China Normal University, CHINA  
 Ecosystem Economics LLC, USA  
 EGC Pty Ltd, AUSTRALIA  
 Ehime University, JAPAN  
 Engineers without Borders, AUSTRALIA  
 Environment Canterbury, NEW ZEALAND  
 Environment Centre N.T., AUSTRALIA  
 Environment Protection Authority – VIC, AUSTRALIA  
 Environment Victoria, AUSTRALIA  
 Environment Waikato, NEW ZEALAND  
 Environmental Agency of England & Wales, UK  
 Environmental Biotechnology CRC, AUSTRALIA  
 Environmental Defenders Office (NSW), AUSTRALIA  
 Environmental Defenders Office (Qld) Inc, AUSTRALIA  
 Environmental Defense, USA  
 Environmental Planning & Science (Land & Water Management), AUSTRALIA  
 Environmental Protection Agency, AUSTRALIA  
 EnviroNorth Environmental Consultants, AUSTRALIA  
 European Rivers Network, AUSTRALIA  
 eWater CRC, AUSTRALIA  
 Fitzroy Basin Association, AUSTRALIA  
 Fitzroy River & Coastal Catchments Inc., AUSTRALIA  
 Florida International University, USA  
 FONAG, ECUADOR  
 Forests NSW, AUSTRALIA  
 FRC Environmental, AUSTRALIA  
 GHD Pty Ltd, AUSTRALIA  
 Gladstone Area Water Board, AUSTRALIA  
 Glenelg Hopkins CMA, AUSTRALIA  
 Gold Coast City Council, AUSTRALIA  
 Goulburn Broken Catchment Management Authority, AUSTRALIA  
 Grand River Conservation Authority, CANADA  
 Great Lakes Council, AUSTRALIA  
 Greater Wellington Regional Council, NEW ZEALAND  
 Greening Australia, AUSTRALIA  
 Greening Australia Capital Region, AUSTRALIA  
 Greening Australia NSW, AUSTRALIA  
 Griffith University, AUSTRALIA  
 Ground Water Institute, INDIA  
 Habitat Management Services, AUSTRALIA  
 Halcrow, UK  
 Hawkesbury City Council, AUSTRALIA  
 Hawkesbury-Nepean CMA, AUSTRALIA  
 Ho Chi Minh City Irrigation Management Public Company, VIETNAM  
 Horizons Regional Council, NEW ZEALAND  
 Hunter-Central Rivers CMA, AUSTRALIA  
 Hydro Tasmania, AUSTRALIA  
 ICPDR, AUSTRIA  
 Institute for Water of the Republic of Slovenia, SLOVENIA  
 Institute for Water Research, Rhodes University, SOUTH AFRICA  
 Institute of Environmental Systems Research, GERMANY  
 Institute of Hydrobiology, CAS, CHINA  
 Institute of Hydroecology & Ichthyology of Armenian Academy of Sciences, ARMENIA  
 Instituto Mexicano de Tecnologia del Agua, MEXICO  
 International Centre for Integrated Mountain Development (ICIMOD), NEPAL  
 International Centre of Excellence in Water Resources Management, AUSTRALIA  
 International Riverfoundation, AUSTRALIA  
 International Rivers Network, USA  
 International Water Management Institute (IWMI), NEPAL  
 International WaterCentre, AUSTRALIA  
 IPH-UFRGS, BRAZIL  
 Ipswich City Council, AUSTRALIA  
 Irrigation Association of Australia, AUSTRALIA  
 James Cook University, AUSTRALIA

Japan Water Agency, JAPAN  
 Japan Water Resources Environment  
 Technology Center, JAPAN  
 John Wilson & Partners Pty Ltd, AUSTRALIA  
 KBR, AUSTRALIA  
 Kaipara District Council, NEW ZEALAND  
 Kedron Brook Catchment Network,  
 AUSTRALIA  
 Kellogg Brown & Root Pty Ltd, AUSTRALIA  
 Komati Basin Water Authority, SWAZILAND  
 Korea Land Corporation, KOREA  
 Kyoto University, JAPAN  
 Laguna Lake Development Authority,  
 PHILIPPINES  
 Lake Simcoe Region Conservation Authority,  
 CANADA  
 Land & Water Australia, AUSTRALIA  
 Lesotho Highlands Development Authority,  
 LESOTHO  
 Lesotho Highlands Water Commission,  
 SOUTH AFRICA  
 Lloyd Consulting Pty Ltd, AUSTRALIA  
 Logan City Council, AUSTRALIA  
 Los Algarrobos Civil Association,  
 ARGENTINA  
 Lower Murray Darling Catchment  
 Management Authority, AUSTRALIA  
 Makerere Institute of Social Research,  
 UGANDA  
 Makerere University, UGANDA  
 Maroochy Shire Council, AUSTRALIA  
 Mary River Catchment Coordination  
 Committee, AUSTRALIA  
 Mekong River Commission, LAOS  
 Melbourne Water, AUSTRALIA  
 Merri Creek Management Committee,  
 AUSTRALIA  
 Mhlathuze Water, SOUTH AFRICA  
 Mid Coast Water, AUSTRALIA  
 Ministry for the Environment, NEW ZEALAND  
 Ministry of Agriculture & Forestry,  
 NEW ZEALAND  
 Ministry of Water, TANZANIA  
 Mitchell River Watershed Management  
 Group Inc., AUSTRALIA  
 Moggil Creek Catchment Management  
 Group, AUSTRALIA  
 Monash University, AUSTRALIA  
 Monash University, AUSTRALIA  
 Moreton Bay Environment Alliance,  
 AUSTRALIA  
 Murray CMA, AUSTRALIA  
 Murray Wetlands Working Group,  
 AUSTRALIA  
 Murray-Darling Basin Commission,  
 AUSTRALIA  
 Murrumbidgee Catchment Management  
 Authority, AUSTRALIA  
 N4C Norman Creek Catchment Coordinating  
 Committee, AUSTRALIA  
 Nakdong River Environment Research  
 Center, South Korea, KOREA  
 National Fish & Wildlife Foundation, USA  
 National Institute of Water & Atmospheric  
 Research (NIWA), NEW ZEALAND  
 National Water Commission, AUSTRALIA  
 Natural Heritage Institute, USA  
 Natural Resources, Environment & the Arts,  
 AUSTRALIA  
 Nature Conservation Council of NSW,  
 AUSTRALIA  
 Ningbo Municipal Research & Design  
 Institute of Environmental Protection,  
 CHINA  
 Noblewater, AUSTRALIA  
 North Central Catchment Management  
 Authority, AUSTRALIA  
 North Central Texas Council of Govts, USA  
 North East Catchment Management  
 Authority, AUSTRALIA  
 Northern Catchments Network, AUSTRALIA  
 NSW Department of Primary Industries,  
 AUSTRALIA  
 NSW Department of Water & Energy,  
 AUSTRALIA  
 NSW Dept of Environment & Climate  
 Change, AUSTRALIA  
 NSW Murray Wetlands Working Group,  
 AUSTRALIA  
 Office of Lake Macquarie & Catchment  
 Coordinator, AUSTRALIA  
 Ok Tedi Mining Limited, PAPUA NEW  
 GUINEA  
 Opus International Consultants, AUSTRALIA  
 Oregon State University, USA  
 Oregon Water Trust, USA  
 Otago Regional Council, NEW ZEALAND  
 Oxford University, UK  
 Oxley Creek Catchment Association Inc,  
 AUSTRALIA  
 OYO Corporation, JAPAN  
 Pacific Hydro, CHILE  
 Pakistan Water Partnership (PWP),  
 PAKISTAN  
 Pangani Basin Water Board, TANZANIA  
 Parramatta City Council, AUSTRALIA  
 Parsons Brinckerhoff, AUSTRALIA  
 PD Naidoo & Associates, SOUTH AFRICA  
 Pine Rivers Catchment Association Inc,  
 AUSTRALIA  
 Planet Radio, AUSTRALIA  
 PLW Development Solutions Limited, UK  
 Pollution Probe, CANADA  
 Probe International, CANADA  
 Projeto Aguas do Rio Doce, BRAZIL  
 Pukyong National University, KOREA

Pullen Pullen Catchments Group,  
 AUSTRALIA  
 Pusan National University, South Korea,  
 KOREA  
 Queensland Conservation Council,  
 AUSTRALIA  
 Queensland Environmental Protection  
 Agency, AUSTRALIA  
 Queensland University of Technology (QUT),  
 AUSTRALIA  
 Ramsar Convention on Wetlands,  
 SWITZERLAND  
 Reef Plan Secretariat, AUSTRALIA  
 Rio Tinto, AUSTRALIA  
 River Research Centre, INDIA  
 River Restoration Centre, UK  
 Rosalie Shire Council, AUSTRALIA  
 Rural Solutions SA, AUSTRALIA  
 S. Brizga & Associates Pty Ltd, AUSTRALIA  
 SA Department for Environment & Heritage,  
 AUSTRALIA  
 SA Government, AUSTRALIA  
 SA MDB NRM Board, AUSTRALIA  
 Save Our Waterways Now, AUSTRALIA  
 Save the Mary River Coordinating Group Inc,  
 AUSTRALIA  
 Schweizerische Greina-Stiftung,  
 SWITZERLAND  
 Seoul National University, KOREA  
 SEQ Healthy Waterways Partnership,  
 AUSTRALIA  
 SEQWater, AUSTRALIA  
 Shoalhaven City Council, AUSTRALIA  
 Sironko District, UGANDA  
 Sisters of Mary, AUSTRALIA  
 SKM, AUSTRALIA  
 SMEC Australia, AUSTRALIA  
 Sonoran Institute & The University Of  
 Arizona, USA  
 Sontek/YSI, AUSTRALIA  
 South West Catchments Council,  
 AUSTRALIA  
 Southern Institute of Water Resources  
 Research, VIETNAM  
 Southern Waters Ecological Research and  
 Consulting, SOUTH AFRICA  
 Stanwell Corporation, AUSTRALIA  
 State Hydrological Institute, RUSSIA  
 Stockholm International Water Institute,  
 SWEDEN  
 Streamline Research Pty Ltd, AUSTRALIA  
 SunWater, AUSTRALIA  
 Sutherland Shire Council, AUSTRALIA  
 Swan Catchment Council, AUSTRALIA  
 Swedish Univeristy of Agricultural Sciences,  
 SWEDEN  
 Sydney Catchment Authority, AUSTRALIA  
 Syrinx Environmental PL, AUSTRALIA  
 Tasmanian Aquaculture & Fisheries Institute,  
 AUSTRALIA  
 Territory & Municipal Services, AUSTRALIA  
 Tetra Tech Inc, USA  
 The Australian National University,  
 AUSTRALIA  
 The Green Corridor Project (BRICMA),  
 AUSTRALIA  
 The Nature Conservancy, AUSTRALIA  
 The Nature Conservancy, CHINA  
 The Nature Conservancy, COLOMBIA  
 The Nature Conservancy, HONDURAS  
 The Nature Conservancy, MEXICO  
 The Nature Conservancy, USA  
 The University of Melbourne, AUSTRALIA  
 The University Of Queensland, AUSTRALIA  
 The Wilderness Society, AUSTRALIA  
 Thiess Services Pty Ltd, AUSTRALIA  
 Tien Giang Irrigation Management Public  
 Company, VIETNAM  
 Tipa & Associates, NEW ZEALAND  
 Torbay Catchment Group, AUSTRALIA  
 Toyo University, JAPAN  
 Trout Unlimited, USA  
 Tweed Kenya Mentoring Program, KENYA  
 Tweed Shire Council, AUSTRALIA  
 Ume University, SWEDEN  
 UNEP, KENYA  
 UNESCO, FRANCE  
 UNESCO IHE, NETHERLANDS  
 Universidad Autonoma de Sinaloa, MEXICO  
 University of Agriculture, NIGERIA  
 University of Applied Sciences, GERMANY  
 University of Auckland, NEW ZEALAND  
 University of Brasilia, BRAZIL  
 University of California, Berkeley, USA  
 University of California, Davis Extension, USA  
 University of Cape Town, SOUTH AFRICA  
 University of Guelph, School of Engineering,  
 CANADA  
 University of Johannesburg, APK,  
 SOUTH AFRICA  
 University of London, UK  
 University of Maryland, USA  
 University of North Texas, USA  
 University of Peradeniya, Sri Lanka,  
 SRI LANKA  
 University of Southern Queensland,  
 AUSTRALIA  
 University of Technology Sydney,  
 AUSTRALIA  
 University of the Witwatersrand,  
 SOUTH AFRICA  
 University of Western Australia, AUSTRALIA  
 University of York, Environment Dept, UK  
 UNSW Water Research Laboratory,  
 AUSTRALIA  
 Upper Deschutes Watershed Council, USA

US Army Corps of Engineers, USA  
US Army Corps of Engineers, Hydrologic  
Engineering Center, USA  
US Fish & Wildlife Service, USA  
US Forest Service, USA  
US Geological Survey, USA  
Victoria University, AUSTRALIA  
Wageningen University, NETHERLANDS  
Waikato Regional Council, NEW ZEALAND  
Waitakere City Council, NEW ZEALAND  
Walla Walla Community College - Water &  
Environmental Center, USA  
Water Affairs & Forestry, SOUTH AFRICA  
Water Research Commission, SOUTH  
AFRICA  
Water Technology Pty Ltd, AUSTRALIA  
Waterfind Environment Fund, AUSTRALIA  
Wesley Research Foundation, AUSTRALIA  
Wide Bay Water Corporation, AUSTRALIA  
WL | Delft Hydraulics, NETHERLANDS  
World Bank, USA  
World Conservation Union (IUCN),  
SRI LANKA  
World Conservation Union (IUCN),  
SWITZERLAND  
World Conservation Union (IUCN),  
THAILAND  
World Conservation Union (IUCN) Eastern  
Africa Regional Office, TANZANIA  
World Conservation Union (IUCN)  
Mesoamerica, COSTA RICA  
WorldFish Center, SRI LANKA  
WWF-Australia, AUSTRALIA  
WWF-Chihuahuan Desert Program, USA  
WWF-China Programme Office, CHINA  
WWF-East Africa Regional Programme  
Office, KENYA  
WWF-Germany, GERMANY  
WWF-India, INDIA  
WWF-International, AUSTRALIA  
WWF-Pakistan, PAKISTAN  
WWF-Papua New Guinea, PAPUA NEW  
GUINEA  
WWF-Spain, SPAIN  
WWF-Sweden, SWEDEN  
Wyong Shire Council, AUSTRALIA  
Xstrata Coal, AUSTRALIA  
Yamanashi Institute of Environmental  
Sciences, JAPAN  
Yantai Institute of Coastal Zone Research for  
Sustainable Development, CHINA  
Yarne & Associates, Inc, USA  
Yellow River Conservancy Commission,  
CHINA  
Zitholele Consulting Pty Ltd, SOUTH AFRICA