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The complete report can be downloaded from:

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IRN

RENEWABLES YES!
BIG HYDRO NO!

TWELVE REASONS TO EXCLUDE LARGE HYDRO FROM RENEWABLES INITIATIVES

This summary of the report, "Twelve Reasons to Exclude Large Hydro from Renewables Initiatives," has been prepared for distribution at the International Conference for Renewable Energies, Bonn, June 2004. This summary has been endorsed by 247 groups and networks in 61 countries.

Funds to reduce the climatic and other environmental impacts of energy production and consumption, to advance sustainable development, and to increase energy security should be used for the promotion of "new renewables." The most important "new renewables" are modern biomass, geothermal, wind, solar, marine energy, and small hydro (<10 MW) compliant with the recommendations of the World Commission on Dams (WCD).

Below are 12 key reasons why large hydropower projects should be excluded from global efforts to promote renewable energy:

1 Large hydro does not have the poverty reduction benefits of decentralized renewables

Large hydro is capital-intensive and dependent on large centers of demand and long transmission lines. In contrast, "new renewables" can be built in small, geographically dispersed units of capacity, minimizing transmission costs and power losses, and spreading out economic development benefits. Delivering modern energy services to the quarter of the world's population currently without access to them requires a massive effort to expand decentralized renewables. Promoting large hydro will only distract funding and attention from this effort.

2 Including large hydro in renewables initiatives would crowd out funds for new renewables

Large hydro plants are among the most expensive infrastructure projects on the planet. Including subsidies for them in renewables schemes could consume the bulk of special funds, leaving little left to promote "new renewables."

3 Promoters of large hydro regularly underestimate costs and exaggerate benefits

Dam promoters have regularly underestimated the economic costs of large hydropower projects as well as the numbers of people requiring resettlement or compensation for lost lands, homes, and sources of livelihood. While costs are on average far higher than predicted, large hydropower dams often generate less power than promised.

4 Large hydro will increase vulnerability to climate change

Large hydro developers do not currently take into account the hydrological impacts of climate change. This means that dams are being built with designs that do not allow for the new extremes of drought or floods that global warming is predicted to cause. This has serious implications for dam performance – particularly that droughts will sharply reduce hydropower generation – and safety.

Photo of Rural Kenyan woman holding her new PV panel by Shannon Graham

5 There is no technology transfer benefit from large hydro

Global renewable funds and carbon trading mechanisms are supposed to facilitate the transfer of new technologies from Northern to Southern countries and to provide the support needed to increase production and bring down unit costs of these technologies. These arguments do not apply to large hydro, which is already a mature technology and well established in Southern countries.

6 Large hydro projects have major social and ecological impacts

According to the World Commission on Dams (WCD), large dams are responsible for the evictions of 40-80 million people, with many of the displaced receiving no or inadequate compensation. Millions of people have also lost their land and livelihoods, and have suffered because of downstream and other indirect impacts of large dams. Large dams are a major factor in the rapid decline of riverine biodiversity worldwide.

7 Efforts to mitigate the impacts of large hydro typically fail

Many impacts of large hydro go unacknowledged or underestimated, and measures to prevent or reduce their impacts frequently fail. Even when people are recognized as eligible for resettlement they rarely have their livelihoods restored. There is a similar abysmal record of failed efforts to mitigate the environmental impacts of large dams.

8 Large hydro promoters oppose measures to prevent the construction of destructive projects

The WCD has developed criteria for water and energy planning which could prevent destructive dams from being built, encourage better alternatives, and reduce the impacts of existing projects. But since following these criteria would mean building fewer dams, hydro proponents such as the World Bank and International Hydropower Association have attacked the credibility of the WCD and lobbied to prevent the application of its recommendations.

9 Large reservoirs can emit significant amounts of greenhouse gases

Rotting organic matter in hydropower reservoirs causes emissions of methane and carbon dioxide. While there is still much scientific controversy over how to measure hydropower emissions and compare them with emissions from fossil fuel plants, it appears that hydro projects with large reservoirs in the tropics can have a greater climatic impact per unit of power generated than fossil fuel generation.

10 Large hydro is slow, lumpy, inflexible and getting more expensive

Because of their huge size and site-specific requirements, large hydro projects take longer to build and are more expensive than other types of power plants. While large hydro plants take on average around six years to build, wind turbines and solar panels can start delivering benefits and repaying loans within months of entering construction. The World Bank has found that the costs of hydropower capacity are steadily increasing because the best sites for hydro have already been exploited.

Large hydro plants by definition add capacity to power grids in large "lumps," while power demand usually grows gradually. "Lumpy" capacity additions can mean power shortages before the new capacity comes on-line, then costly overcapacity once the new plant is available.

11 Many countries are already over-dependent on hydropower

Large hydro contributes more than half of the total electricity supply in 63 countries, almost all in the global South and ex-Soviet Union. Many of these hydro-dependent countries experience drought-induced blackouts and energy rationing, a problem that is expected to be exacerbated by climate change. Yet it is in these countries where the bulk of new large hydro capacity is planned.

12 Large hydro reservoirs are often rendered non-renewable by sedimentation

Dam reservoirs are depleted over time by sedimentation, a problem that eventually seriously impedes or ends the ability of a hydro plant to produce electricity. The great majority of annual sediment loads are carried during flood periods. The higher intensity and frequency of floods due to global warming are therefore likely to increase sedimentation rates and thus further shorten the useful lives of reservoirs.

Villagers protesting on the Mun River in Thailand.

ORGANIZATIONAL ENDORSEMENTS

This summary of the report, "Twelve Reasons to Exclude Large Hydro from Renewables Initiatives," is endorsed by the following 247 organizations in 61 countries.

ARGENTINA
Federación Amigos de la Tierra
Foro Ecologista de Paraná
Fundación Proteger
Grupo Ecologista Cuña Pirú
Taller Ecologista

ARMENIA
NGO EcoTeam

AUSTRALIA
AID/WATCH
Australian Conservation Foundation
Friends of the Earth
Mineral Policy Instiute

AUSTRIA
Anti Atom International
Global 2000/Friends of the Earth
Independent Salzburg Platform Against Nuclear Dangers (PLAGE)

BANGLADESH
BanglaPraxis
Parbatya Chattagram Jana Samihati Samiti

BELGIUM
For Mother Earth
Proyecto Gato

BELIZE
Belize Institute of Environmental Law and Policy

BOTSWANA
Kalahari Conservation Society

BRAZIL
Central Única dos Trabalhadores
Fórum Matogrossense de Meio de Ambiente e Desenvolvimento
Friends of the Earth
Grupo de Trabalho Amazonico
Instituto Terrazul
Kooperation Brasilien (KoBra)
Saran

BULGARIA
Centre for Environmental Information and Education
Za Zemiata

CAMBODIA
NGO Forum on Cambodia

CANADA
Barnard-Boecker Centre Foundation
Dam-Reservoir Working Group
David Suzuki Foundation
Friends of the Earth
Friends of Grand River/Mista Shipu
NGO Working Group on EDC
Rights Action
The Social Justice Committee

CHILE
Brigada Nicolasita-Inti Simón
Comite Ciudadano por la Defensa de Aisén Reserva de Vida

CHINA
Globalisation Monitor
Green Watershed

COLOMBIA
Asociación de Productores para el Desarrollo Comunitario de la Ciénaga Grande del Bajo Sinú (ASPROCIG)
Friends of the Earth

COSTA RICA
Federación Costarricense para la Conservación del Ambiente
Justicia para la Naturaleza

CZECH REPUBLIC
Arnika
Hnuti DUHA/Friends of the Earth

EL SALVADOR
CESTA/Friends of the Earth
Permaculture Institute of El Salvador

FINLAND
Finnish Asiatic Society
Friends of the Earth

FRANCE
Fédération Rhône-Alpes de Protection de la Nature
Friends of the Earth
Helio International Sustainable Energy Watch
South Asia Citizens Web

GERMANY
Artefact GmbH
Asienhaus
Forum Environment and Development
German Carajás Forum
Institute for Ecology and Action Anthropology
Society for Threatened Peoples
Urgewald
World Economy, Ecology and Development (WEED)

GHANA
Volta Basin Development Foundation

GUATEMALA
Asociación Campesina Nuevo San Francisco
Asociación Víctimas del Conflicto Armado
Colectivo Madreselva
Comunidad El Subín
Comunidad El Zompopero
Comunidad Monterico
Comunidades Populares en Resistencia del Petén
Comunidad Vista Hermosa Los Chorros
Consejo de Investigaciones e Información en Desarrollo (CIID)
Consejo Indígena Q'eqchi de Petén
Cooperativa Bonanza
Cooperativa Nuevo Horizonte
Frente Petenero contra Represas
Programa de Salud Maya Petén
Red Comunitaria para la Gestión del Riego

HONDURAS
Consejo Cívico de Organizaciones Populares e Indígenas
Organización Fraternal Negra de Honduras (OFRANEH)

HUNGARY
Clean Air Action Group

INDIA
Andhra Pradesh Vyavasaya Vruthidarula Union
Association for India's Development (AID)
The Catalyst Group, Inc.
Centre for Organisation Research & Education (CORE)
Chalakudy Puzha Samrakshana Samithi
Citizens Concern for Dams and Development (CCDD)
Delhi Forum
Ecologist Asia
Good Earth Society
Hmar Indigenous Peoples Association/Hmar Student Association
Initiative
Jaikwadi Project Affected People's Organisation
Manipur Nature Society
Manthan Adhyayan Kendra
Narmada Bachao Andolan
National Alliance of People's Movements
North Eastern Affected Area Development Society
North Eastern Social Research Centre
Pennurimai Iyyakkam
The People's Movement
Rural Volunteers Centre (RVC)
Sunray Harvesters
Vimukti Social Action Cell

INDONESIA
Bureau of Consultation for West Papua
Indigenous Community
Natural Resources and Development Institute (NADI)
Network for Fresh Water Advocacy
Taratak
TI Indonesia

ITALY
CNS Ecologia Politica

IVORY COAST
National Forum against Poverty (FNDP)

JAPAN
A SEED
Campaign for Future of Filipino Children
Friends of the Earth
Fukuoka NGO forum on ADB
Japan Center for a Sustainable Environment and Society (JACSES)
Jubilee Kyushu on World Debt and Poverty
Mekong Watch
Mukogawa Conservation Network
Renewable Energy Promoting People's Forum (REPP)
Struggle Committee Against Tokuyama Dam
Suigen-ren (National Dam Opposition Network)

LITHUANIA
Community "Atgaja"

MALAYSIA
Indigenous Peoples Development Center
Sahabat Alam Malaysia/Friends of the Earth

SOS Selangor (Save Our Sungai Selangor)
Suara Rakyat Malaysia (SUARAM)

MALTA

The Malta Energy Efficiency and Renewable Energies Association (MEEREA)

MEXICO

Alternativas y Procesos de Participación Social AC
Centro de Investigaciones Económicas y Políticas de Acción Comunitaria (CIEPAC)
En Defensa del Ambiente AC
Frente por la Defensa de los Derechos Economicos, Socio-Ambientales y Culturales de los Pueblos
Instituto Nacional de Antropología e Historia
Union de Comunidades Indigenas de la Zona Norte del Istmo (UCI-ZONI)

MOZAMBIQUE

Justiça Ambiental

NAMIBIA

Earthlife Namibia

NEPAL

South Asian Solidarity for Rivers and Peoples (SARP)
Water and Energy Users' Federation, Nepal (WAFED)

NETHERLANDS

Both ENDS
Play Fair Europe! Amsterdam

NIGERIA

African Network for Environment and Economic Justice (ANEEJ)
Bread of Life Development Foundation/WaterWatch
Coalition of Dam Communities
Gender and Development Action (GADA)
Pan African Vision for the Environment (PAVE)
Society for Water & Public Health Protection (SWAPHEP)

NORWAY

Association for International Water and Forest Studies (FIVAS)

PAKISTAN

ActionAid Pakistan
Pakistan Network on Rivers, Dams and People (PNRDP)

PANAMA

Alianza para la Conservación y Desarrollo (ACD)
Ngobe-Bugle

PARAGUAY

Sobrevivencia/Friends of the Earth

PHILIPPINES

Ecological Society of the Philippines
National Federation of Indigenous Peoples Organizations (KAMP)
NGO Coalition for Renewable Energy and Sustainability (NCORES)
Philippine Network on Climate Change (PNCC)
Philippine Rural Reconstruction Movement (PRRM)
Sibol ng Agham at Teknolohiya (SIBAT)
Tebtebba Foundation
Tignayan Dagiti Mannalon a Mangwayawaya ti Agno (TIM-MAWA)
WWF-Philippines

POLAND

Klub Gaja

PORTUGAL

Euronatura

ROMANIA

Earth Friends

SENEGAL

Co-ordination for Senegal River Basin (CODESEN)

SLOVAK REPUBLIC

Dubnica Environmental Group
Friends of the Earth
Society for Sustainable Living

SOUTH AFRICA

Attaqua House of First Nation Indigenous Peoples
Earth52
Earthlife Africa eThekwini
Environmental Monitoring Group
GREEN Network
Groundwork/Friends of the Earth
Group for Environmental Monitoring
International Solar Energy Society, Africa
Observatory for Sustainable Development
South African Climate Action Network (SACAN)
Sustainable Energy Society of Southern Africa

SOUTH KOREA

Korean Federation for Environmental Movement

SPAIN

Asociación Conservacionista de Pescadores del Sur (ACPES)
ACUDE
ALMÁCIGA
Anbiotek S.L.
Asociación Ecologista del Jarama El Soto
Asociación por la Recuperacion del Bosque Autoctono
Asociación Rio Aragón Contra el Recrecimiento de Yesa/COAGRET
Asociación Rio Susia
Club Deportivo Básico Sociedad de Pescadores Río Sorbe
Coordinadora de Afectados por Grandes Embalses y Trasvases (COAGRET)
Coordinadora Biscarrues - Mallos de Riglos
Ebro Vivo/COAGRET
Ecologistas en Acción
Ecologistas en Acción de Extremadura
Ecologistas en Acción de Guadalajara
Fundacion de Artistas e Intelectuales Por Los Pueblos Indigenas de Iberoamerica
Izquierda Unida
JPF Consultors
Plataforma Jarama VIVO
URBIC Consultoría e Ingeniería de la Edificación

SWEDEN

Swedish Society for Nature Conservation

TANZANIA

Foundation HELP

THAILAND

Assembly of the Poor
EarthRights International
Focus on the Global South
Southeast Asia Rivers Network (SEARIN)

TOGO

Young Volunteers for Environment
Youth Association Network for Sustainable Development (YANESD)

UGANDA

Climate and Development Initiatives
Environmental NGOs Lobby Group
National Association of Professional Environmentalists (NAPE)
Uganda Environmental Education Foundation (UEEF)

UNITED KINGDOM

Bretton Woods Project
The Corner House
Down to Earth: the International Campaign for Ecological Justice in Indonesia
Forest Peoples Programme
Kurdish Human Rights Project
Rising Tide
SinksWatch
UK Rivers Network

URUGUAY

Centro de Estudios Uruguayo de Technologías Apropiadas (CEUTA)

USA

Center for Biological Diversity
Center for Political Ecology
Environmental Defense
Friends of the Earth
Friends of the Eel River
Global Response
Greenpeace USA
Institute for Agriculture and Trade Policy
Minnesotans for an Energy-Efficient Economy (ME3)
JustEnergy Campaign
National Water Center
Pacific Environment
Southern Appalachian Biodiversity Project
Sustainable Energy and Economy Network
Tibet Justice Center
Umpqua Watersheds, Inc.

ZAMBIA

Advocacy for Environment Zambia
Citizens for a Better Environment (CBE)
Energy and Environmental Concerns for Zambia

INTERNATIONAL

Climate Action Network (CAN) Europe
Greenpeace Australia Pacific
Red de Organizaciones Socioambientales de Entre Rios y Organizaciones Ecologistas de la Rca. Oriental del Uruguay
Indigenous Environmental Network
International Indian Treaty Council
Southern African Regional Climate Action Network (SARCAN)