



Hydropower Sustainability Assessment Protocol

Hydropower
for the Green
Economy

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Zaragoza



International Hydropower Association

- Mission: to advance sustainable hydropower
- Non-profit organisation founded in 1995 under the auspices of UNESCO
- Central office: London, UK
- National office: China
- Regional office: Brazil
- UN-Water partner



A role for Hydropower in water management



Irrigation

Flood control



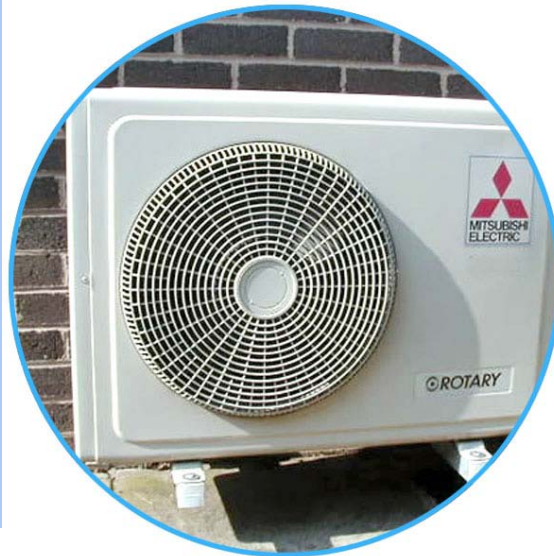
Navigation

Electricity is central to the Green Economy



Power

Heating
& cooling



Transport

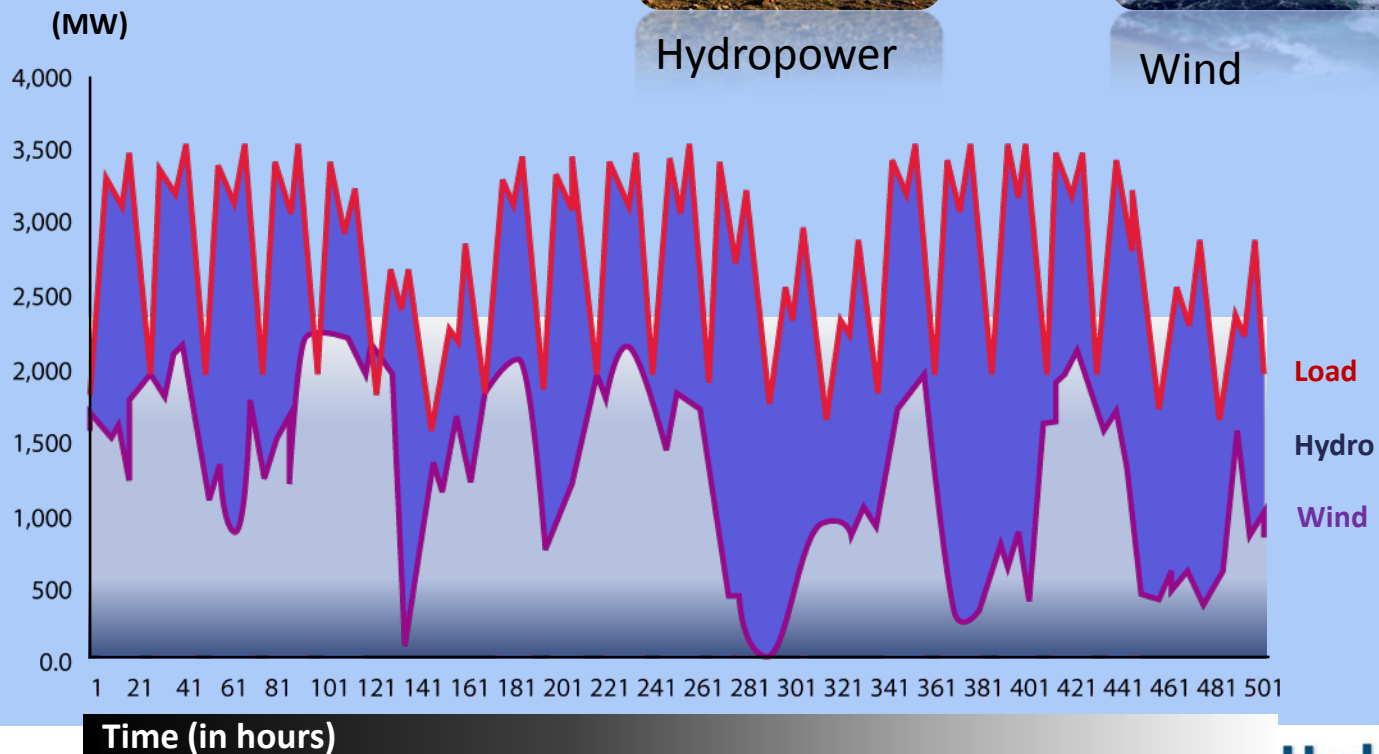
Optimization – Example Tasmania



Hydropower



Wind



The Case: the Hydropower Sustainability Assessment Protocol

- A framework for assessing the sustainability of hydropower projects
- Distils hydropower sustainability into over 20 clearly-defined topics
- Consistent, globally-applicable methodology
- Governed by a multi-stakeholder Council and terms and conditions

Recognised by leading organisations (including WWF, The Nature Conservancy, Transparency International) as a “valuable tool to measure and improve the sustainability of hydropower projects”

Evolution

Results from a rigorous and informed multi-stakeholder process, including WWF, Transparency International, Banks and Governments.

- 2000 World Commission on Dams Final Report
- 2003 IHA Sustainability Guidelines
- 2006 Initial Sustainability Assessment Protocol
- 2008-10 Multi-stakeholder Forum refines the Hydropower Sustainability Assessment Protocol
- 2011 Official launch at the IHA World Congress, and establishment of the Council

Policies taken into account included: World Commission on Dams' Criteria and Guidelines; World Bank Safeguard Policies; IFC Performance Standards; and Equator Principles.



Hydropower Sustainability Assessment Forum (2008-2010)

Developing Countries

Dr Yu Xuezhong, Research Professor, China
Institute of Water Resources and Hydropower Research, PR China

Mr Zhou Shichun, Senior Engineer, China
Hydropower Engineering Consulting Group Co., PR China

Mr Israel Phiri, Manager PPI, **Ministry of Energy and Water Development, Zambia**

Developed Countries

Mr Geir Hermansen, Senior Advisor, Department of Energy, **Norad, Norway**

Prof Gudni A Johannesson, Director General, **National Energy Authority, Iceland**

Ms Kirsten Nyman, Policy Advisor for Sustainable Hydropower, **GTZ, Germany** (observer)

Finance Sector - Economic Aspects

Ms Courtney Lowrance, Vice President, Environmental & Social Risk Management, **Citigroup Global Markets Inc**, representing the Equator Principles Financial Institutions Group

Ms Daryl Fields, Senior Water Resources Specialist, **The World Bank** (observer)

Hydropower Sector

Dr Refaat Abdel-Malek, President, **International Hydropower Association**

Mr Andrew Scanlon, Manager Business Sustainability, **Hydro Tasmania**

NGOs - Environmental Aspects

Mr David Harrison, Senior Advisor, Global Freshwater Team, **The Nature Conservancy**

Dr Joerg Hartmann, WWF Dams Initiative Leader, **World Wide Fund for Nature (WWF)**

NGOs - Social Aspects

Mr Michael Simon, Lead, People, Infrastructure & Environment Program, **Oxfam**

Dr Donal O'Leary, Senior Advisor, **Transparency International**

Forum Chair: Mr André Abadie, Director, **Sustainable Finance Ltd.**

Forum Coordinator: Dr Helen Locher, Sustainability Forum Coordinator, **International Hydropower Association**

Forum activities



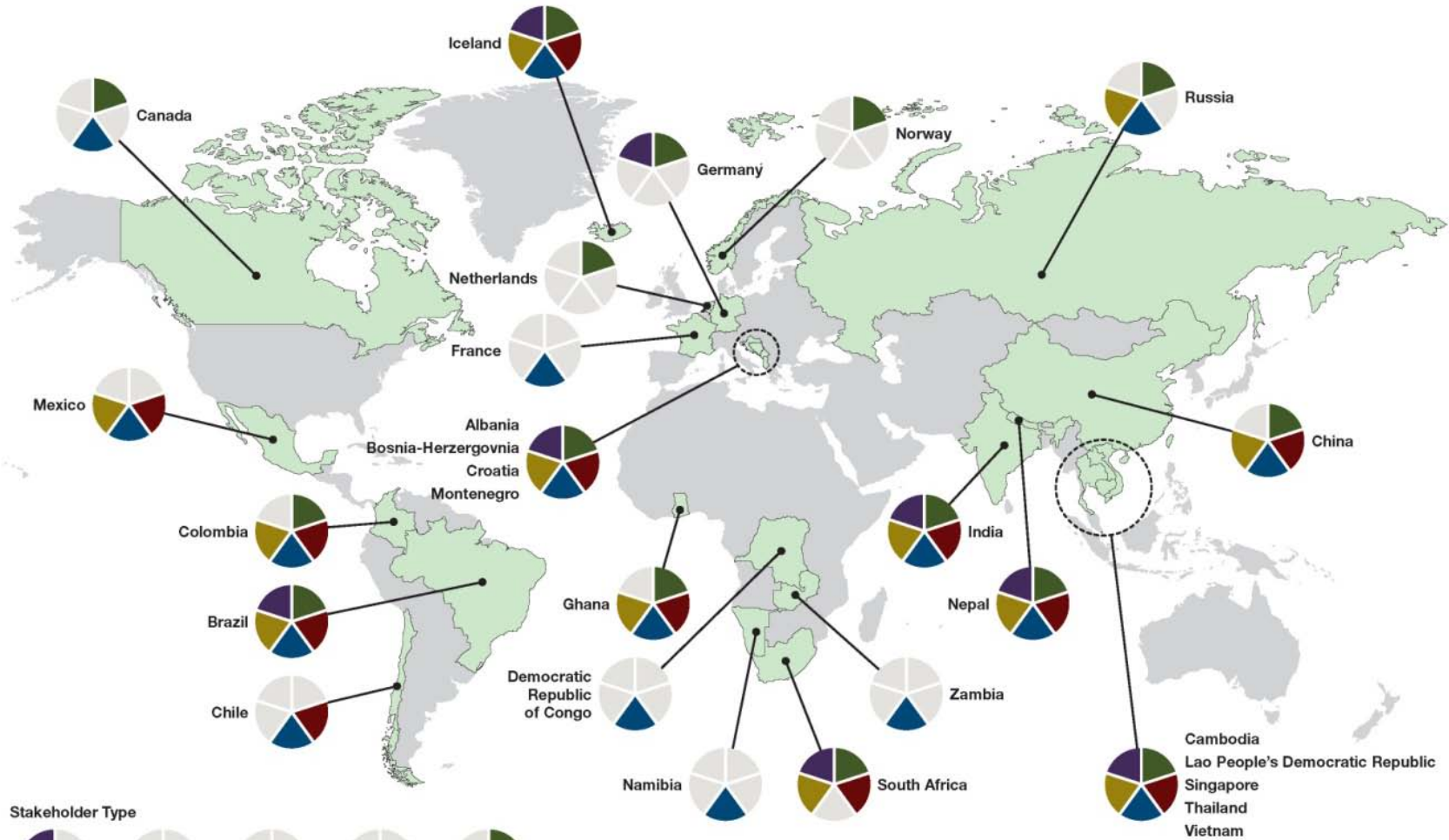
Field trials

- 20 trials of the draft Protocol involving 18 hydropower companies on 6 continents with projects of all types, sizes and life cycle stages

Stakeholder engagement

- 24 countries involved in stakeholder engagement
- 1,308 stakeholders attended engagement activities
- 3,800 stakeholders receiving email updates during the consultation period
- Approximately 3,000 hits to the draft Protocol webpage

Engagement



Protocol documents

Background document:



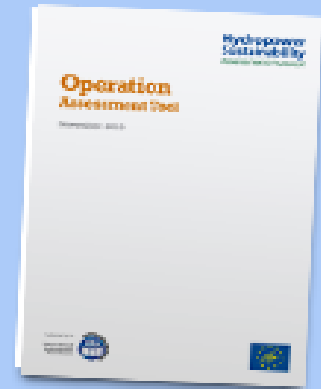
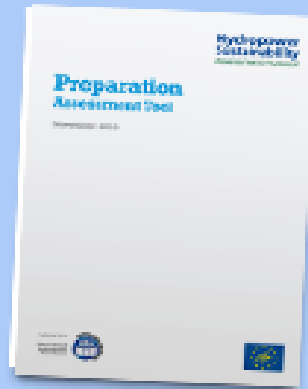
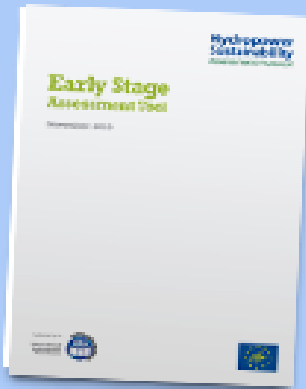
Four methodology documents for four stages of development:

Early stage

Preparation

Implementation

Operation



Protocol Topics from a Sustainability Perspective

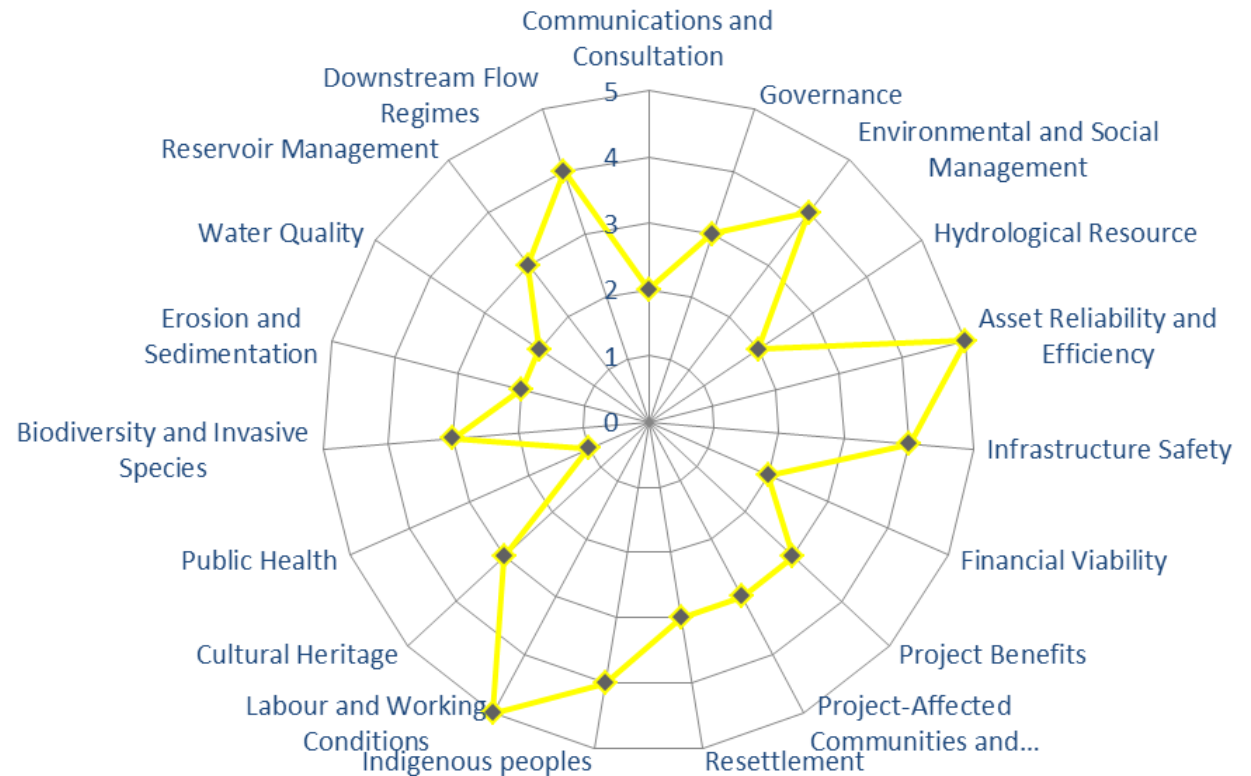
Cross-cutting	Environmental	Social	Technical	Economic / Financial
Climate Change	Downstream Flow Regimes	Resettlement	Siting and Design	Financial Viability
Human Rights	Erosion and Sedimentation	Indigenous Peoples	Hydrological Resource	Economic Viability
Gender	Water Quality	Public Health	Infrastructure Safety	Project Benefits
Livelihoods	Biodiversity and Invasive Species	Cultural Heritage	Asset Reliability and Efficiency	Procurement

An Official Protocol Assessment delivers:

- Evidence-based objective assessment of a project's performance, prepared by an accredited assessor
- A score of 1 to 5 for each topic area, related to basic good practice and proven best practice
- An assessment report according to a standard format, automatically saved in IHA's assessment database
- Synthesis of information on complex facilities into a concise and presentable report
- Option to make results public
- Easily communicable spider diagram of results

Sustainability Profile

- Scoring: 1-5
- 3 = basic good practice
- 5 = proven best practice



Benefits of using the Protocol

Identification of practical recommendations to improve sustainability performance

Targeting of recommendations on areas of weaker performance

Strengthened understanding of sustainability amongst developers and operators

Assurance to government and non-government on performance

A neutral platform for dialogue between industry and affected parties on specific issues

Informs international lenders and provides key information and recommendations

Assurance to purchasing utilities

A signal to the public of commitment to sustainability

Allows presentation of results for portfolios of facilities as part of corporate reporting



The Protocol for Capacity Building

- Training for industry partners, local NGOs and regulators
- Training and accreditation of assessors
- Protocol is freely available and serves as general guidance, useable for internal objective setting or as inspiration for project feasibility and ESIA

Multi-stakeholder governance

- Hydropower Sustainability Assessment Council, governed by a Charter
- 7 Chambers to inform multi-sectoral aspects of protocol application
- Terms and conditions for use of the Protocol defining official and unofficial use
- Management entity currently based in IHA Central Office in London

Governance Committee

Developing Countries

Professor Guoqing Shi, National Research Centre for Resettlement, **Hohai University, China**

Developed Countries

Mr Tor Morten Sneve, Senior Adviser, Department of Economic Development, Energy, Gender and Governance, **Norad, Norway**

Ms Ana Bachurova, Adviser, **GIZ, Germany**

Mr Friedrich Hetzel, Adviser, **BMZ, Germany**

Finance Sector

Ms Courtney Lowrance, Vice President, Environmental and Social Risk Management, **Citi Institutional Clients Group**

Ms Gwen Terras, Environmental Specialist, **Société Générale**

Mr Rikard Liden, Senior Hydropower Specialist, **World Bank** (observer)

Hydropower Sector

Dr Refaat Abdel-Malek, President, **International Hydropower Association**

Ms Karin Seelos, Vice-President, Power Generation – International Affairs, **Statkraft**

NGOs - Environmental Aspects

Mr David Harrison, Senior Advisor, Global Freshwater Team, **The Nature Conservancy**

Dr Joerg Hartmann, WWF Dams Initiative Leader, **WWF International (Chair)**

Mr Jianhua Meng, Sustainable Hydropower, **WWF Germany**

NGOs - Social Aspects

Dr Donal O'Leary, Senior Advisor, **Transparency International**

Lessons Learned From Implementation

- Consensus *can* be achieved
 - Requires persistence and willingness to engage
 - Unprecedented diversity and breadth of stakeholders
 - One area of non-consensus is now being negotiated
- Kazakhstan Protocol Assessment (October 2010)
 - Important experience for future assessments, incl:
 - Need for clearly defined roles during an assessment
 - Detailed preparation for evidence gathering
 - Important to carefully schedule consultations

www.hydrosustainability.org

- Protocol documents: background and four stages
- Charter, and Terms and Conditions
- FAQs and news
- Database of published Protocol assessments



search by keyword

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