



Contact

Sustainable Hydropower Website
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About this site

The Sustainable Hydropower website was launched on the web as in March 2006. This site is a major initiative to facilitate capacity building for all sectors of society in the sustainable provision of water and energy services through hydropower. The aim is to populate the site with example schemes from a diverse representation, to provide a comprehensive education tool for the hydropower sector. A Sustainable Hydropower Foundation is proposed to will provide the financial and governance framework to progress the site.

Website Development Process

This site was researched, developed and is managed by Hydro Tasmania (www.hydro.com.au), based in Australia, as an initiative for the Environment and Sustainability Committee of the International Hydropower Association (www.hydropower.org). Hydro Tasmania identified more than 100 schemes for investigation for inclusion on this site, and provided scheme summaries for 18 schemes. The site has been considerably augmented by the contribution of the [New Energy Foundation](#), who has enabled the inclusion of 30 of their good practice case studies developed under [Annex VIII of the International Energy Agency's Implementing Agreement for Hydropower Technologies and Programmes](#).

Key Aspects of Sustainability

In developing the site, guidance on key aspects of sustainability was most primarily sourced from the International Hydropower Association's Sustainability Guidelines and Sustainability Assessment, the International Energy Agency's technical reports from the Implementing Agreement for Hydropower Technologies and Programmes, the World Commission on Dams knowledge base, and several other key references in the literature.

Scheme Names

Sources of scheme names listed in this website are:

- New Energy Foundation's Best Practices and Success Stories project;
- International Energy Agency's technical reports from the Implementing Agreement for Hydropower Technologies and Programmes;
- World Commission on Dams knowledge base;

- Dams and Development Project's database;
- World Bank documents and reports;
- WWF's good case studies;
- Schemes recognised by certification programs such as Low Impact Hydropower Institute and the Swiss label 'Naturemade';
- Schemes recognised by awards, such as the US 'Outstanding Stewardship of American Rivers' awards and the IHA Blue Planet Prize;
- literature and web searches.

As of March 2006, 48 schemes have been summarised on this site for its initial launching, but they have not yet been through the process for scheme assessment and approval outlined for this website.

Comments are sought on any of the schemes listed in this site, or any information contained on the site. Over time these schemes will be assessed in accordance with the website management process outlined for the Sustainable Hydropower website.

Scheme Summaries

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Website Management

Site Manager

The website will be managed by a Website Management Team operated by Hydro Tasmania.

Until establishment of the proposed Sustainable Hydropower Foundation, the Website Management Team will operate under the guidance of a Website Reference Panel comprising IHA and UNESCO representatives.

Eligible Schemes

Schemes to be included on the website can encompass the full life-cycle of hydropower schemes, from planning, design, construction, operation and decommissioning.

This site only includes schemes that others can look to as examples of how to address particular sustainability issues. Therefore, inclusion of a scheme on the website will be dependent on the scheme demonstrating innovative or excellent management of one or more of the sustainability aspects listed on this site, where this aspect was considered problematic or requiring sensitive management.

Schemes that have been constructed under incentive schemes to encourage renewable energy do not qualify for site inclusion based solely on this aspect, as there would be far too many over time. If sites have pursued particularly innovative approaches to intentionally avoid greenhouse gas generation, for example through siting and design or operating patterns, these would be considered for inclusion.

Schemes will be included on this site that may not be considered completely 'sustainable' in all their aspects, if there are particularly innovative or educational approaches taken by the scheme to manage any one particular sustainability aspect. Each scheme summary will include a section called 'Sustainability Challenges' which will identify aspects of that scheme which have been or continue to be problematic.

Scheme Nominations

Scheme nominations will be accepted by submission through the live website ([Scheme Nomination form](#)) or by mail ([Contacts](#)). Nominations need to include a description of the scheme in the format shown on the Scheme Nomination form.

The Website Management Team will initially review the nomination. If appropriate, the information will then be posted on the website as a nominated scheme requiring site assessment, with the following status:

Scheme Assessments

Inclusion of a scheme on the website requires an independent assessment of the scheme, which will be based upon the [IHA Compliance Protocol](#). The assessment will comprise a tour of the scheme, interviews with staff and external stakeholders as appropriate, and review of documentation as requested by the assessment team.

Assessments will be undertaken by individuals or organizations providing this role on a consulting basis. Sustainable Hydropower Website assessors must be approved by the Website Reference Panel, and:

1. must be familiar with standard auditing processes and protocols;
2. must understand the applicable standards – the Sustainability Guidelines and IHA Compliance Protocol; and
3. must understand the hydropower sector.

Agreement on if and what sustainability aspect the scheme best illustrates will be made between the assessment team and the scheme owner/operator. A scheme summary will then be drafted in agreement with the scheme owner/operator and scheme assessment team for presentation to the Website Reference Panel.

Upon establishment of the proposed Sustainable Hydropower Foundation, the assessments will be undertaken by auditors accredited by the Governing Board of the Sustainable Hydropower Foundation.

The IHA Sustainability Assessment

The Sustainability Assessment, presently in draft, is being developed as an industry audit tool to provide a mechanism to assess sustainability of new and existing hydropower schemes. It establishes a rating system for each of the key sustainability aspects, and the audit process requires the provision of evidence to support the assessment of scheme performance. The Protocol has been developed in consultation with industry and a number of international non-government agencies. As of October 2005 it has been tested in North America and Europe, with tests planned for Africa and Asia, to assess its applicability to schemes at a range of scales and in a range of contexts. Opportunities to further test and refine this audit tool are being sought ([What You Can Do](#)).

Reference Panel Approval

Inclusion of a scheme requires the review and sign-off of the Website Reference Panel, and approval of scheme inclusion is by Panel consensus.

As an interim arrangement, the Panel will comprise three members of the IHA and one representative from UNESCO, and will meet two times per year.

The expectations of Reference Panel members would be:

- independence from any interests in the scheme under assessment; and
- clearly demonstrated experience in the water and/or energy sectors.

Upon establishment of the proposed Sustainable Hydropower Foundation, the Website Reference Panel will be appointed by the Foundation Governing Board, and so have greater representation by non-industry members.

Status Notation

Each scheme listed on the site will have the following status notation, with ticks provided as appropriate to that scheme:

| |
|-------------------------------------|
| √ Scheme Listed on Website [date] |
| √ Site Assessment Undertaken [date] |
| √ Owner/Operator Approved [date] |
| √ Reference Panel Approved [date] |

Time Span

Schemes approved by the Website Reference Panel will retain their presence on the website for a period of five years.

After five years, they will undergo an updated site assessment and require the approval of the Reference Panel. If approved for ongoing inclusion, the website will contain an updated summary of the scheme.

Feedback and Public Comment

The site allows for feedback and public comment on any scheme included on the site. This will not only be for the nominated schemes which have a formal twelve week public comment period, but also for approved schemes during their five year period on the site.

If feedback and public comment brings relevant new information to light, the Website Reference Panel may request the assessment to be re-done. The Website Reference Panel can initiate this process at any stage in the five-year cycle, and provide closer scrutiny of the assessment process if warranted.

References and Resources

Under each of the sustainability aspects one can find a tab which includes references and resources on that topic. Contributions for inclusions to these areas are sought.

Businesses and consultants providing services relevant to that aspect (for example, expertise in calculations of environmental flows) can be listed as a resource provided that they provide information demonstrating their expertise and an [annual fee](#) which will go to support the Sustainable Hydropower Foundation.

Links to Sustainability Certification

No overall sustainability rating is made for the schemes on this site. This would be undertaken as part of a Sustainable Hydropower Certification Program, which is under development.

A Sustainable Hydropower Certification Program would demonstrate that a project meets a certain standard of sustainability performance. Schemes would undergo an assessment rating under the Sustainability Assessment and obtain verification of their achievements through certification. Assessments would be undertaken as formal audits by auditors accredited with a certification governing board. Such a program would provide assurance to potential owners, investors, developers, regulators, insurance providers and other stakeholders about minimisation of risks.

Schemes which receive certification for sustainability under this future program would be included on the Sustainable Hydropower Website under a specific section for certified schemes.

How to Advance this Site

The Sustainable Hydropower Website and the Sustainable Hydropower Foundation are positive measures being initiated to advance sustainability in the hydropower sector. Advancement of these initiatives is dependent upon a number of other

requirements. There are many ways one can show their support for the advancement of sustainable practices in the hydropower industry. Check here under [What You Can Do](#).

Who Should be Interested

The Foundation can bring together industry, government and many other interested parties by fostering mutual collaboration. Entities that could be involved include international organizations, financing agencies, hydropower developers, owners and providers, governmental agencies, non-governmental organizations, academia, consultants and members of civil society. The engagement of a wide range of collaborators will ensure credibility, viability, transparency and quality of information. Some thoughts on the pertinent interests, potential contributions and benefits for the different types of interested parties are as follows:

International organizations

- *Pertinent interests:* Provision of sustainable solutions to meet the world's water and energy needs; climate change mitigation; advancement of Millennium Development Goals; Johannesburg Plan of Implementation.
- *Potential contribution:* Sustainable Hydropower Foundation partner; Foundation financial supporter and/or endorsing organisation; opinion on information structure and content; expertise in auditing and assessment; awareness raising.
- *Benefits:* Improved outcomes relating to the sustainable provision of water and energy, contribution to capacity building.

Financing agencies

- *Pertinent interests:* Responsible funding for water and energy services; poverty alleviation through sustainable development.
- *Specific contribution:* Foundation financial supporter and/or endorsing organisation; expertise in economic analysis and fund management; awareness raising.
- *Benefits:* Increased awareness of good practice, reducing risk in funding projects; opportunity to highlight involvement in successful schemes.

Hydropower developers, owners and providers

- *Pertinent interests:* Continuous improvement; corporate responsibility; sustainable practices.
- *Specific contribution:* Foundation financial supporter and/or endorsing organisation; expertise in technical information; scheme nominations for evaluation; support during scheme assessments; awareness raising.
- *Benefits:* Demonstration of commitment to sustainable practices and continuous improvement; increased understanding of good practice; improved awareness of hydropower.

Governmental agencies

- *Pertinent interests:* Meeting needs in accordance with international good practice for resource development and management.
 - *Specific contribution:* Foundation financial supporter and/or endorsing organisation; expertise in regulatory processes, auditing and assessment; scheme nominations for evaluation; support during scheme assessments; awareness raising.
 - *Potential benefits:* Clarification of international good practice; increased investment in, and reduced risk for, sustainable development projects.
- Non-governmental organizations
- *Pertinent interests:* Environmental management; social equity
 - *Potential contribution:* Foundation financial supporter and/or endorsing organisation; opinion on information structure, content and evaluation processes; scheme nominations for evaluation; awareness raising.
 - *Potential benefits:* Demonstrable cross-sector cooperation; influence on international practice.

Measures of Success

It is valuable to establish measures of success of a new initiative at the outset, as it can assist organisations and individuals in considering how they might contribute.

The number and profile of supporting and endorsing organizations is an important initial and ongoing measure of success for this initiative. The amount of money contributed to the Foundation is a further measure, as is successful access to grant and philanthropic funding.

Engagement across the spectrum of stakeholders (type of institution, country base) through means such as financial support, support-in-kind, scheme nominations, auditing support, hosting meetings, promotion etc would be a key goal for the Foundation.

The number of website ‘hits’ and downloads is a measure of interest and the accessibility of the information available. Number of links to and from other associated websites is also a good indication of relevance, co-operation and mutual support.

The number of scheme nominations, and the number of audits undertaken, will indicate engagement by the hydropower industry members. Growth in the number, geographic spread, and calibre of the auditing organizations will indicate the availability and spread of experts in sustainable hydropower across the globe.

The number of successful audits and inclusion of schemes on the website over time is an indicator of success towards the Foundation’s vision.

Realisation of potential Foundation development paths will be a strong indicator of success. These would include the amount of research sponsorship, published materials relevant to sustainability aspects, scholarships, educational packages, etc.

What You Can Do

How can you ensure the most values out of this site:

1. Provide feedback through [feedback survey](#).
2. Comment on any information provided on this site
3. [Nominate schemes](#)
4. Express interest in a partnership with the IHA and other agencies to govern the Foundation
5. [Pledge financial support](#)
6. List your organisation as an endorsing body <insert link>
7. Provide a link to this website from your industry/associations site
8. Increase the awareness of others, e.g. put notices about website in newsletters, journals, conference programs, websites etc
9. Contribute information links on documents for the reference section of each sustainability aspect
10. List your company, if it has particular expertise on a sustainability aspect, as a resource.
11. Apply the [IHA Sustainability Assessment Protocol](#) to a scheme and see where are the scheme's strengths, weaknesses and opportunities.

Site Map & Resources



[Site Resources.pdf](#)

[Sitemap.pdf](#)