



The only acceptable hydropower?

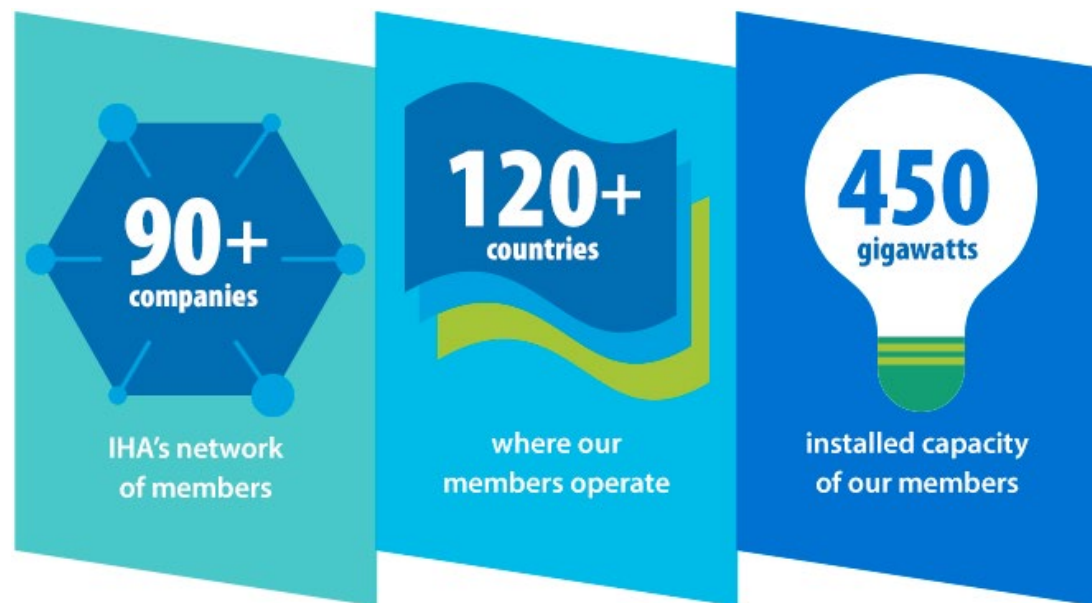


**2nd International Conference on
Sustainability in Hydropower**

hydropower.org

Introduction

The International Hydropower Association (IHA) is a non-profit membership association. We are the global voice of sustainable hydropower. Our members are committed to the responsible and sustainable development and operation of hydropower.



Mission

IHA's mission is to advance sustainable hydropower. IHA's broader objectives are:

To be the global voice of sustainable hydropower.

To increase investment in sustainable hydropower by engaging with global policymakers, financial decision makers, and the public with strong, clear and engaging evidence-based advocacy.

To position sustainable hydropower as a clean, green, modern and affordable solution to climate change and energy security.

These objectives echo the commitments in the San José Declaration on Sustainable Hydropower adopted in September 2021.

What we do

We provide trusted and credible information and guidance to decision-makers and practitioners.

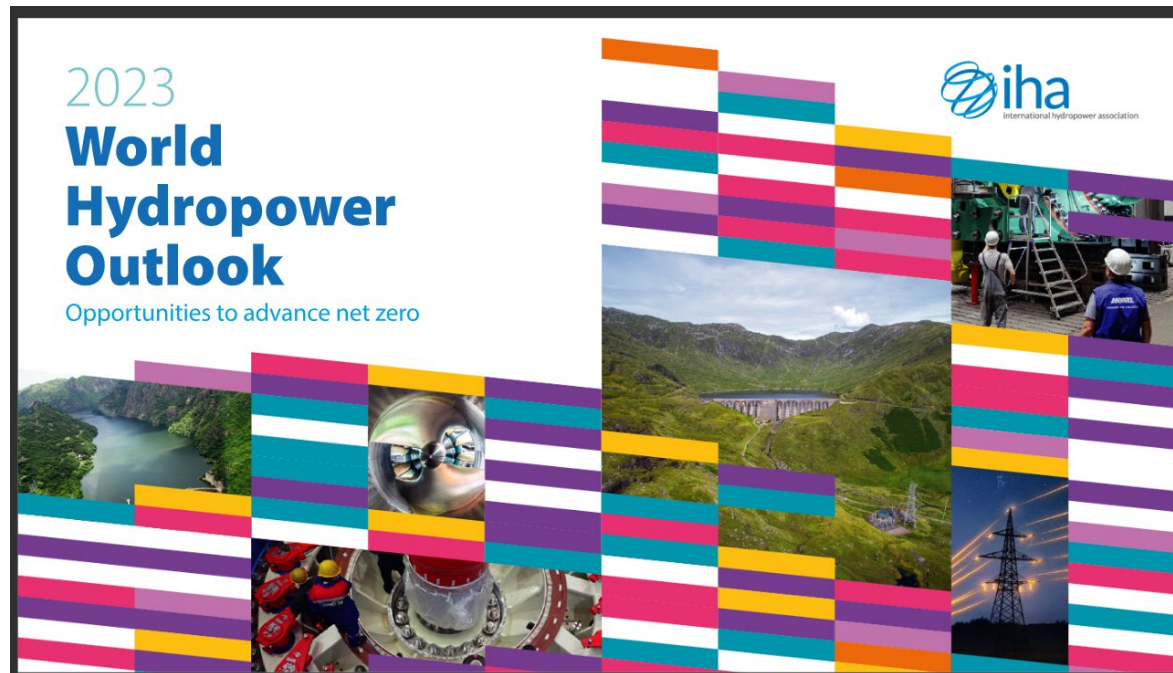
We build and share knowledge through our partnerships with a broad range of stakeholders including governments and multilateral institutions, civil society, finance, scientific and academic sectors.



*"We greatly value IHA's role and its record of providing industry leadership for its members and developing standards for best practice and frameworks for policy and regulatory advancement."
Hydro Tasmania*

- 1. Provide necessary evidence and platforms for advocacy through a series of work streams, projects and events.**
- 2. Mobilise members and stakeholders to promote change through advocacy and communications efforts at a global level.**
- 3. Build a track record of sustainability through assessments and certifications under the Hydropower Sustainability Standard.**

Tracking and encouraging progress: World Hydropower Outlook



hydropower.org

2023 World Hydropower Outlook

To fill the 700 GW gap in hydropower needed to achieve net zero, world leaders need to:

- **Incentivise sustainable hydropower development through market mechanisms that reward flexibility**
- **Accelerate the development of renewables through streamlined permitting and licensing.**
- **Embed hydropower sustainability practices in government regulation.**



hydropower.org/outlook

Our Members



Operating in more than 120 countries, IHA's members include the world's leading hydropower developers, operators and manufacturers.

We represent organisations committed to the responsible and sustainable development and operation of hydropower. IHA members are leading hydropower operators, developers, designers, suppliers and consultants.





Putting sustainable hydropower at the heart of the energy transition



Fact-based advocacy



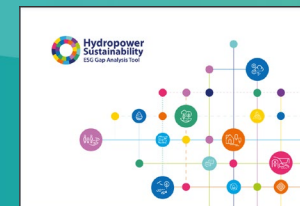
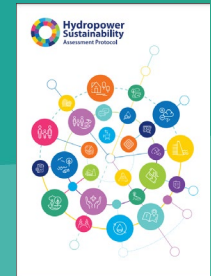
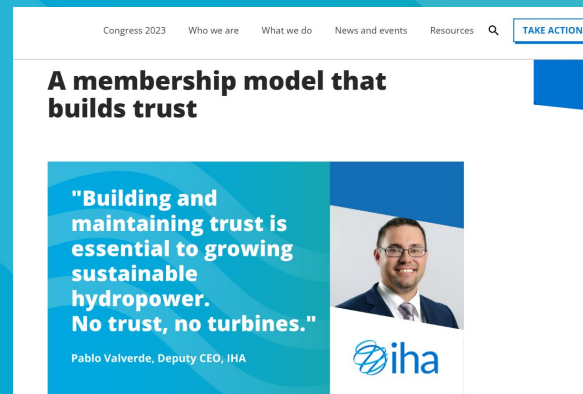
Policy



Markets



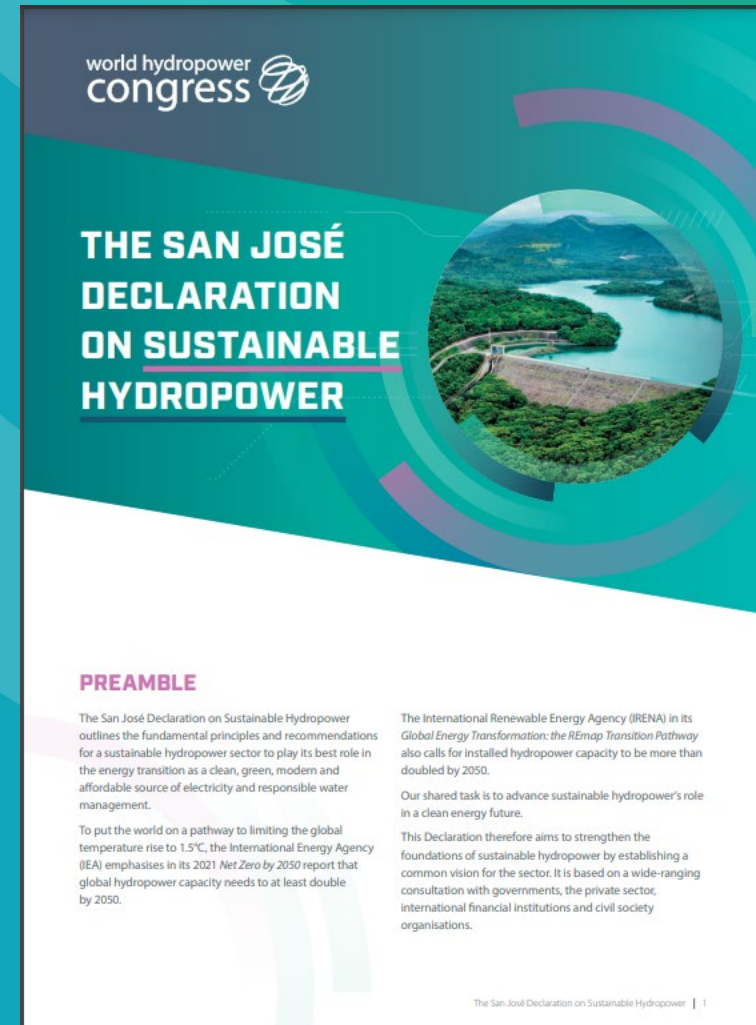
Sustainability




IHA Charter for Sustainable Hydropower (2020)

The International Hydropower Association's Charter for Sustainable Hydropower symbolises the commitment of the association, and its members, to the responsible development of hydropower.

The charter was announced on 16 November 2020 on IHA's 25th anniversary.



world hydropower congress 

THE SAN JOSÉ DECLARATION ON SUSTAINABLE HYDROPOWER

PREAMBLE

The San José Declaration on Sustainable Hydropower outlines the fundamental principles and recommendations for a sustainable hydropower sector to play its best role in the energy transition as a clean, green, modern and affordable source of electricity and responsible water management.


To put the world on a pathway to limiting the global temperature rise to 1.5°C, the International Energy Agency (IEA) emphasises in its 2021 *Net Zero by 2050* report that global hydropower capacity needs to at least double by 2050.

The International Renewable Energy Agency (IRENA) in its *Global Energy Transformation: the REmap Transition Pathway* also calls for installed hydropower capacity to be more than doubled by 2050.


Our shared task is to advance sustainable hydropower's role in a clean energy future.

This Declaration therefore aims to strengthen the foundations of sustainable hydropower by establishing a common vision for the sector. It is based on a wide-ranging consultation with governments, the private sector, international financial institutions and civil society organisations.

The San José Declaration on Sustainable Hydropower | 1

world hydropower congress 

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The San José Declaration on Sustainable Hydropower | 1

IHA makes no-go commitment on World Heritage Sites, with duty of care for Protected Areas

“The new IHA commitment is a major step forward by the hydropower industry.”
- UNESCO World Heritage Centre


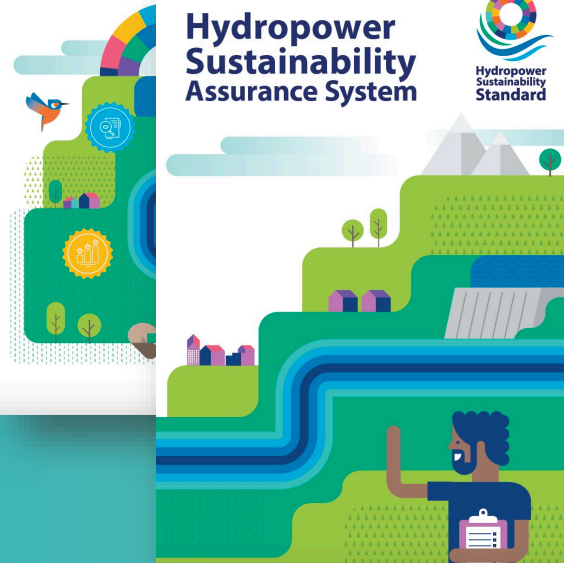
“All actors of society, including the hydropower industry, share the responsibility to protect this natural heritage for future generations.”
- International Union for Conservation of Nature



Hydropower Sustainability Standard



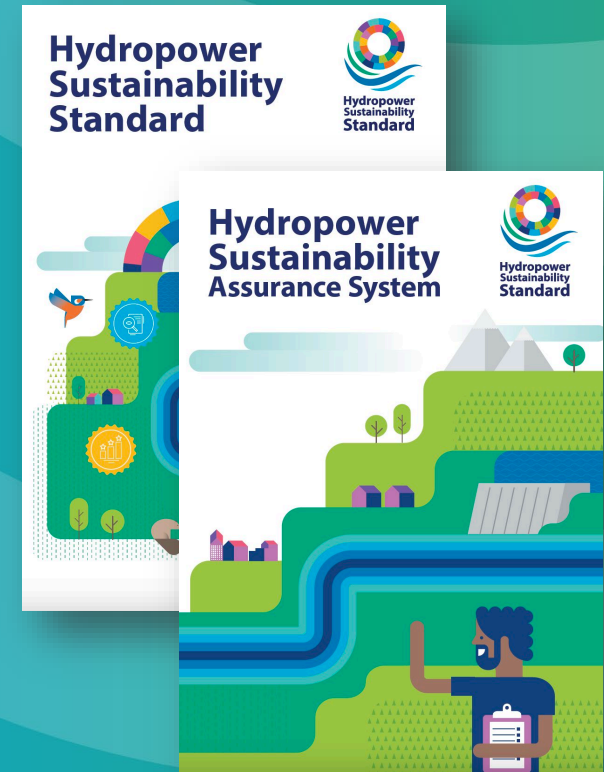
Hydropower Sustainability Assurance System

“Sustainable hydropower is a clean, green, modern and affordable solution to climate change”



“Going forward, the only **acceptable** hydropower is **sustainable hydropower**”.



What does the Standard cover?



Environmental & Social Assessment and Management



Labour and Working Conditions



Water Quality and Sediments



Community Impacts and Infrastructure Safety



Resettlement



Biodiversity and Invasive species



Indigenous Peoples



Cultural Heritage



Governance and Procurement



Communications and Consultation



Hydrological Resource



Climate Change Mitigation and Resilience

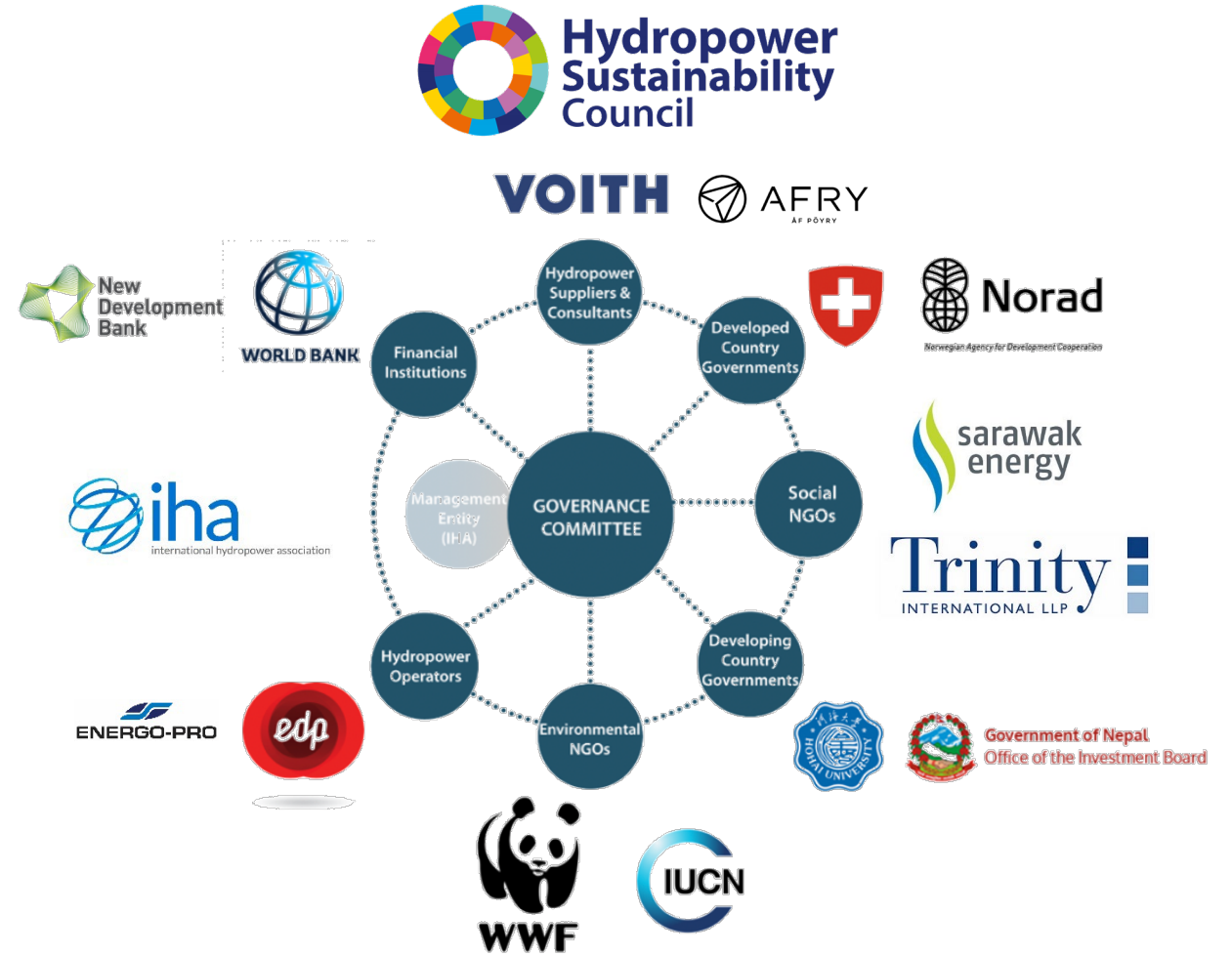
Multi stakeholder origin



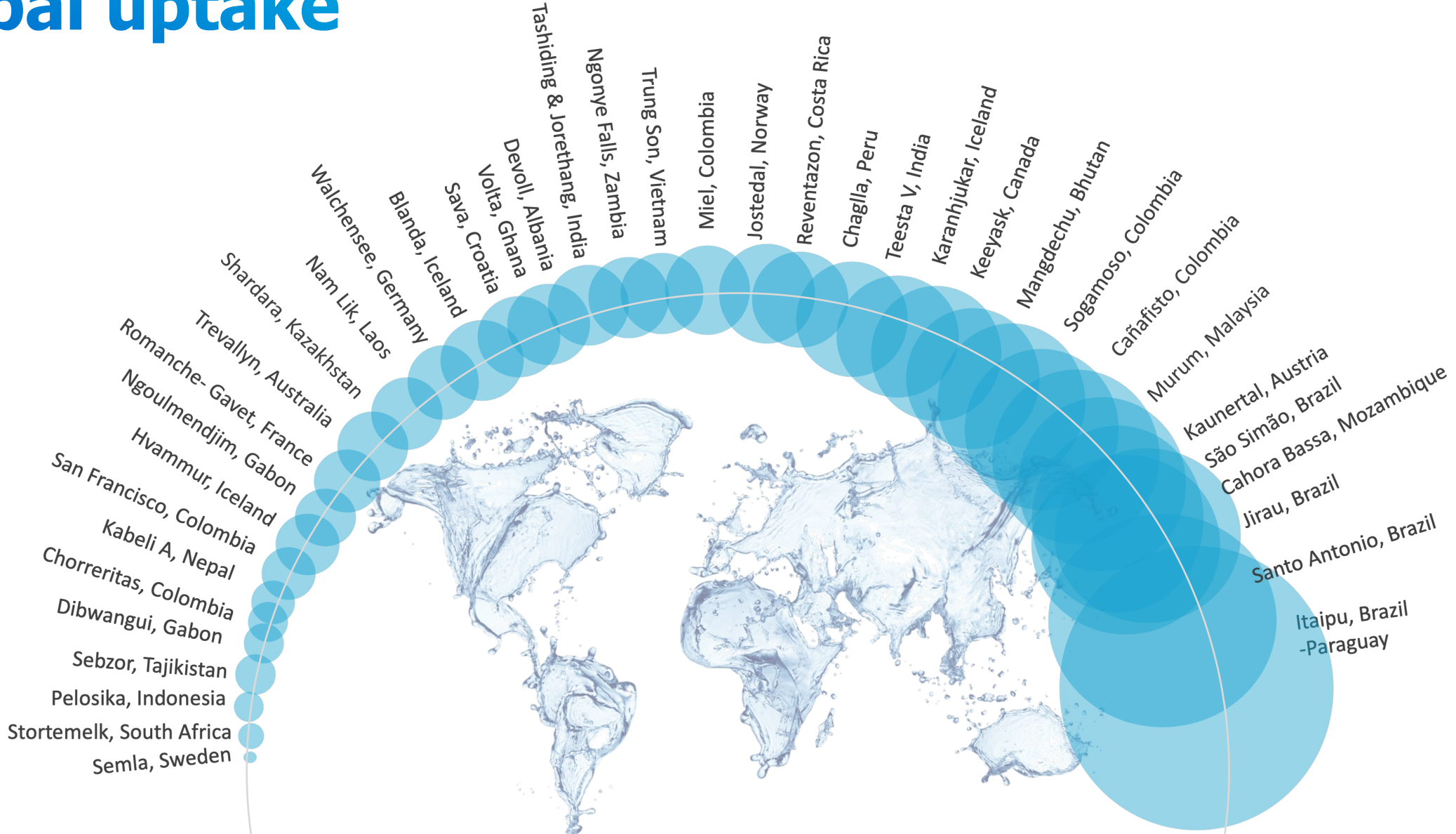
Who developed the HSAP (in 2010)?



Who governs the Standard (today)?



Global uptake



Methodology tested over 10 years

3rd party quality control

Joerg Hartmann

Joerg holds a PhD in environmental and development economics. From 1998 to 2007, he worked for Germany's development bank KfW, on water and natural resources management. In his last three years at the bank, Joerg was country director for Tanzania and chaired the water donors group, which pooled investment resources to reach Tanzania's MDGs on water. From 2007 to 2011, he led WWF's global hydropower and water security work, both at the policy level and through field support for WWF's river basin programmes. Joerg was a member of the Hydropower Sustainability Assessment Protocol between 2008-2010, has participated in a number of Protocol assessments, and previously chaired the Governance Committee of the multi-stakeholder Hydropower Sustainability Assessment Council. Joerg now works as an independent consultant for sustainable water resource solutions.

joerg.hartmann.water@gmail.com



Simon Howard

Simon is a Senior Environment Consultant with Mott MacDonald. He holds a Masters degree in Environmental Policy from Oxford University, and a Bachelors Degree in Environmental Science from Edinburgh University. Simon has 10 years of experience in international development, environment and social impact assessment and engineering. Simon has particular experience in the renewable energy sector having trained as a mechanical and electrical engineer with a leading London based consultancy. He went on to work for a number of years with bilateral and multi lateral donors developing rural electrification projects in South East Asia and the South Pacific. Simon has delivered training on the Hydropower Sustainability Assessment Protocol to 20 IHA Sustainability partners, and has been part of 11 Protocol assessment teams in Ghana, Laos, Iceland, Columbia, Canada, Nepal, Brazil and France.

Simon.Howard@mottmac.com



Helen Locher

Helen has played a leading role in development and implementation of the Hydropower Sustainability Assessment Protocol. Helen led a number of assessments on early Protocol versions between 2003-2006, initiated and led development of the Hydropower Protocol Website (www.sustainablehydropower.org), coordinated the Hydropower Sustainability Assessment Forum (2008-2010), developed the training materials for IHA Sustainability Partners and Accredited Assessors with the 2010 Protocol, and has undertaken a number of assessments with the 2010 Protocol. During her career, Helen has participated in and led Protocol assessments in Australia, Brazil, China, Colombia, Iceland, India, Kazakhstan, Laos, Malaysia, Papua New Guinea, and South Africa. Helen holds a Bachelor degree in Earth Science, a Master degree in Environmental Science, and a PhD in Civil Engineering (focused on mining wastes and sediment transport downstream of a hydropower station). Helen worked for Hydro Tasmania between 1997-2015, where she developed and managed Hydro Tasmania's aquatic environment and management process for the program, led the environmental and social assessment and management process for changes to hydropower operations arising from connecting Hydro Tasmania into the mainland electricity market, and held various senior environment and sustainability roles. Helen has also served for nine years on Tasmanian government boards relating to resource planning and development and environmental protection. In 2015 she was honored with the IHA's Mosonyi Award for excellence in hydropower, recognizing her significant contributions to advancing sustainable hydropower on a global scale.

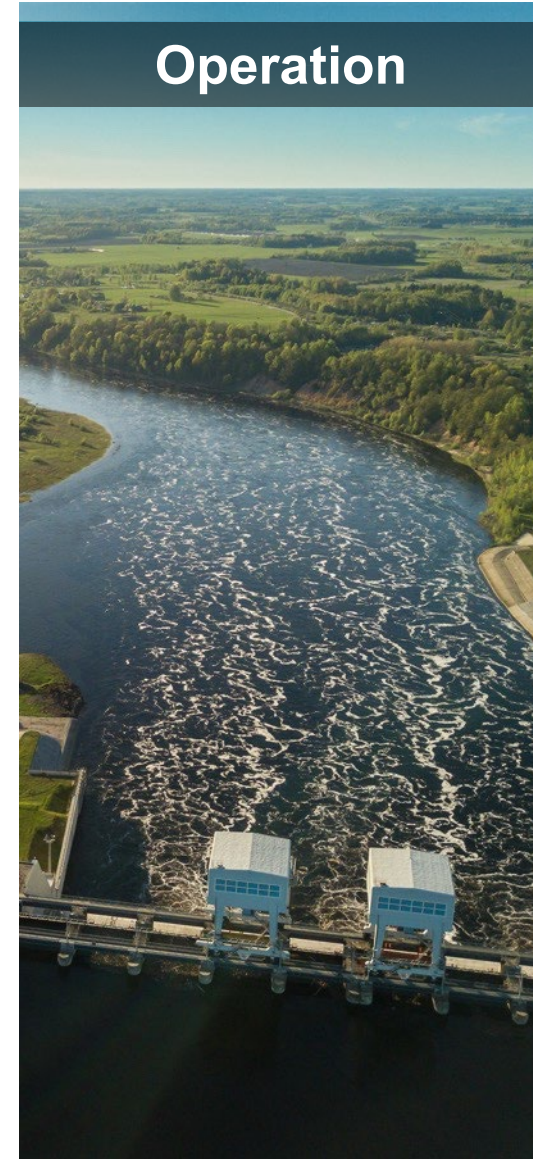


Doug Smith

Consultant, has over forty years experience working in the water and hydropower. He has worked in approximately 40 countries in Africa and Europe. While with the World Bank (1982-2006), he was involved in the identification, preparation, operation and maintenance of projects in a number of countries in Africa and South America. He worked as a volunteer Senior Advisor for Transparency International, promoting good governance and transparency in the water sector. He was the lead author of three large water infrastructure, published jointly by the multi-stakeholder Steering Committee (2015). Doug was a member of the Hydropower Sustainability Assessment Protocol (2015). Doug was a member of the Hydropower Sustainability Assessment Protocol (2015). Doug was a member of the Hydropower Sustainability Assessment Protocol (2015).



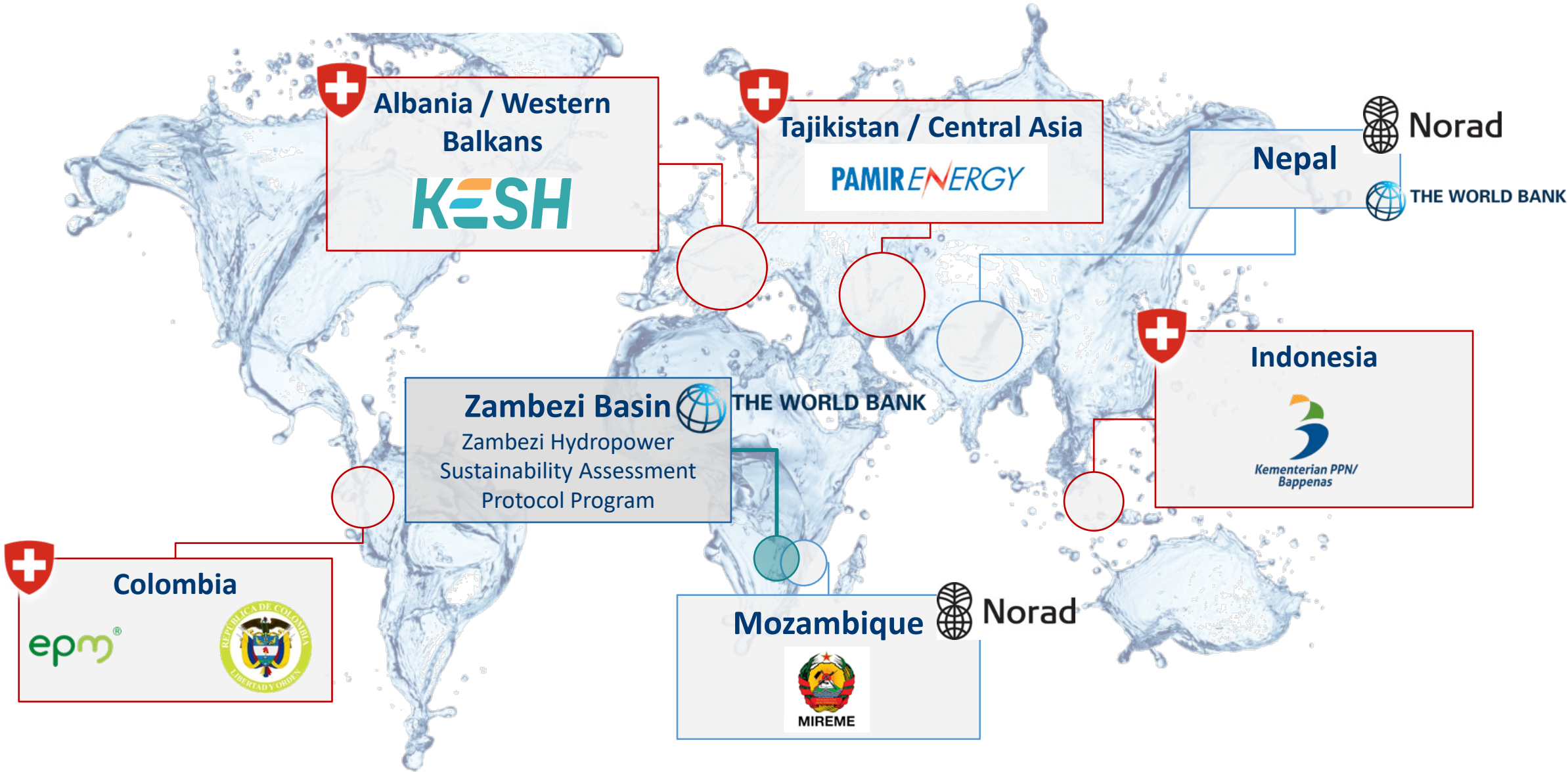
Applicable to 3 stages

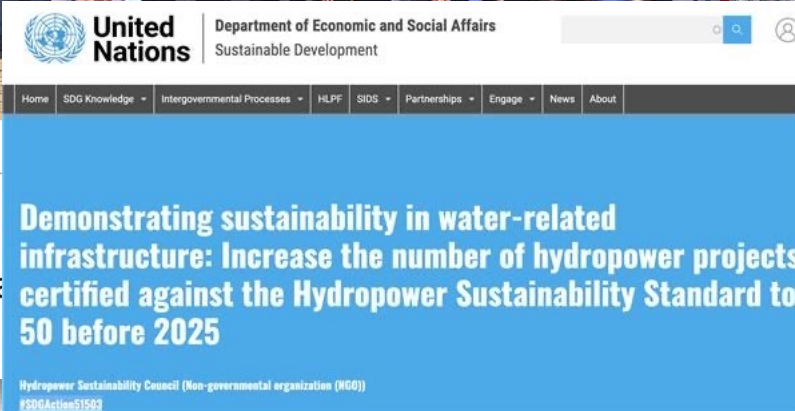
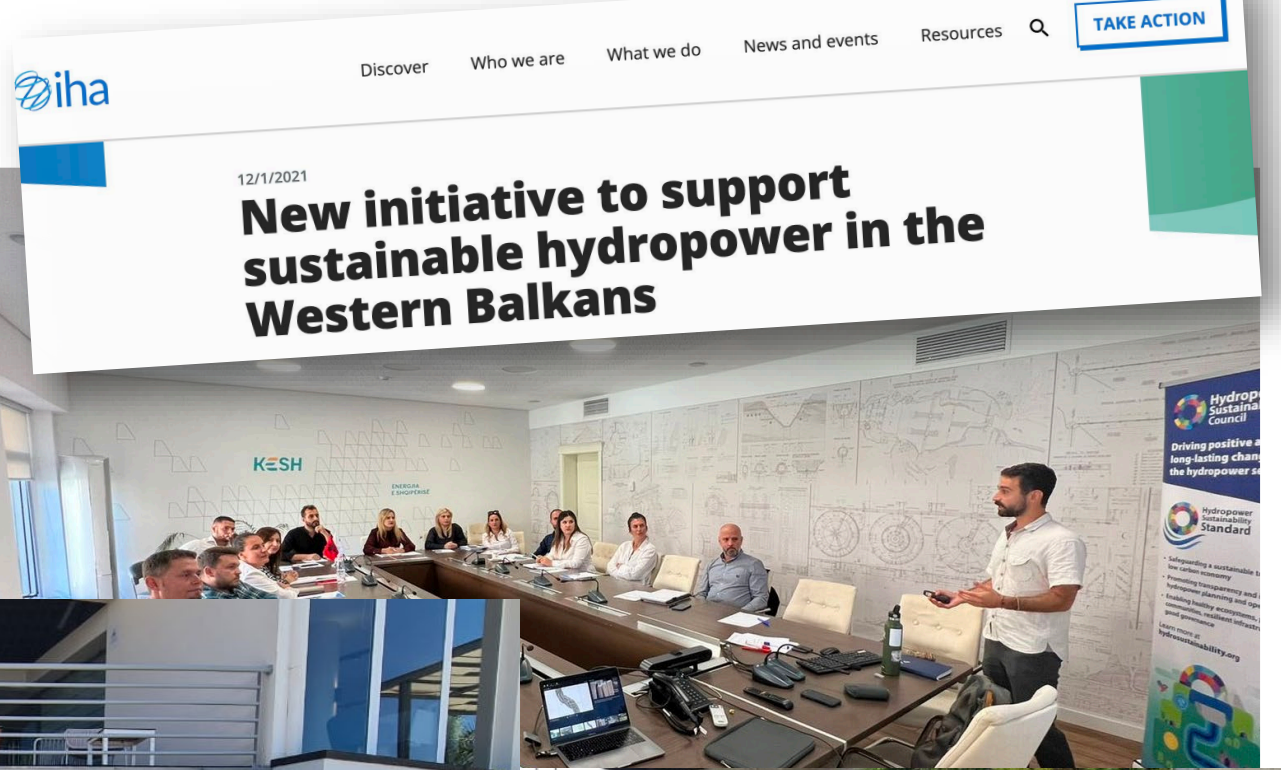


Structured certification process



Beyond assessments





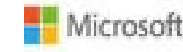
... Sustainability and Pamir Energy drive first certification assessment using the HS Standard in Central Asia

MBER 2022

About Standard Certification Services Resources News SEARCH

Hydropower Sustainability Council (Non-governmental organization (NGO)) #SDGAction51500

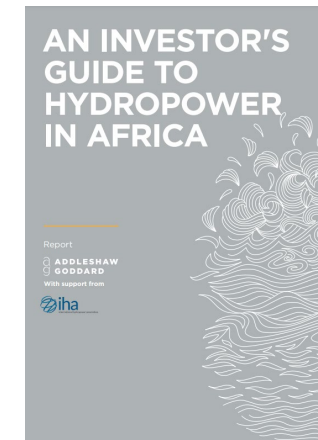
Aligned with financial requirements



Prepare clients to meet lenders requirements



Reduce risk barriers for investment



Use the Hydropower Sustainability Standard to

Demonstrate sustainability



Enhance reputation & Social licence to operate



Unlock international funding



Receive industry recognition



Project Certification Pipeline

30+ Hydropower projects seeking Certification

No.	Project name	Country	Assessment Date	Certification Date	Status
1	Sebzor	Tajikistan (HESG Fund)	Oct-22	Q1 2023	Assessment complete
2	confidential	Canada	September 2022	Q3 2023	Report preparation
3	confidential	Colombia (HESG Fund)	Nov-22	Jun-23	Assessment ongoing
4	confidential	Brazil	Jan-23	Q2 2023	Assessment ongoing
5	confidential	Albania	Junel 2023	Q4 2023	Confirmed interest
6	confidential	Sarawak	Jul-23	Q4 2023	Confirmed interest
7	confidential	Iceland	2023	Q3 2023	Confirmed interest
8	confidential	Malaysia	Q1 2024	By end of 2024	Confirmed interest
9	confidential	Switzerland	2023	Q4 2023	Confirmed interest
10	confidential	Indonesia	Q3 2024	By WHCongress	Confirmed interest
11	confidential	Portugal	2023	2024	Confirmed interest
12	confidential	Brazil	2024	2024	Expressed interest
13	confidential	Laos	2023	2023	Expressed interest
14	confidential	Mozambique	2024	TBC	Expressed interest
15	confidential	Rwanda (HESG Fund)	Ongoing	TBC	TBC after assessment
16	confidential	Tanzania (HESG Fund)	Ongoing	N/A	TBC after assessment
17	confidential	Mozambique (HESG Fund)	November 2022	TBC	TBC after assessment
18	confidential	Zambia / Zimbabwe	2023	TBC	TBC after assessment
19	confidential	Nicaragua (HESG Fund)	2023	TBC	TBC after assessment
20	confidential	Indonesia (HESG Fund)		TBC	TBC after assessment
21	confidential	Brazil	2023/2024	TBC	TBC after assessment
22	confidential	Brazil		TBC	TBC after assessment
23	confidential	Brazil		TBC	TBC after assessment
24	confidential	Brazil		TBC	TBC after assessment
25	confidential	Brazil		TBC	TBC after assessment
26	confidential	Brazil		TBC	TBC after assessment
27	confidential	Brazil		TBC	TBC after assessment
28	confidential	Brazil		TBC	TBC after assessment
29	confidential	Brazil		TBC	TBC after assessment
30	confidential	Brazil		TBC	TBC after assessment
31	confidential	Brazil		TBC	TBC after assessment

Hydropower sustainability guidelines



TECHNICAL TOPICS



ENVIRONMENTAL TOPICS



SOCIAL TOPICS



BUSINESS AND FINANCIAL TOPICS



Building a track record of sustainability



What we expect from our members?



- 1. Support IHA's advocacy efforts**
- 2. Serve as global ambassadors of IHA**
- 3. Implement the Hydropower Sustainability Standard**
- 4. Demonstrate support for the San José Declaration on Sustainable Hydropower**

world hydropower congress



This year's World Hydropower Congress, taking place in Bali on 31 October – 2 November, will bring together more than 1,000 decision makers, innovators and experts from industry, governments, finance, civil society, and academia. It will provide a stage for high-level policy statements, recommendations and commitments that will influence the global growth of sustainable hydropower.

To join us, register using the link below.

Powering Sustainable Growth

REGISTER YOUR INTEREST
www.worldhydropowercongress.org



PLN

2023 World Hydropower Congress

Powering Sustainable Growth

- **WHC:** Award-winning, leading global event for hydropower policy.
- **Participants:** 1,000+ policy-makers, industry, financiers, academics, civil society, and media from 150 countries. Link to 2021 speakers [here](#).
- **Outcome:** High-level policy statements to ensure sustainable hydropower plays its full role in energy security and reaching global net zero.
- **Location:** Bali, Indonesia. Link to venue's video ([here](#)).
- **Date:** 31 October-2 November

Programme ([Link here](#)):

- Three days of high-level panel debates and open exchanges on policy, finance, sustainability and innovations, under the theme Powering Sustainable Growth.
- Networking events (e.g., welcome reception and gala dinner with awards ceremony)
- Showcase area for partners and exhibitors.
- Side events on 30 Oct, a post-Congress tour to largest hpp in Indonesia and floating PV project on 3 Nov and sustainability trainings from 6-8 Nov.

Building on the ground-breaking moments of 2021

The 2021 World Hydropower Congress produced four remarkable moments for hydropower history:

1

The Hydropower Sustainability Standard, drawn together by IHA, but designed by a multi-stakeholder group of industry, governments and NGOs.

2

The San José Declaration on Sustainable Hydropower, a historic document that outlined an ambitious set of recommendations to guide the future of hydropower development.

3

The report of the **International Forum on Pumped Storage Hydropower**. Launched by IHA, the forum brought together 13 governments (including the US, China and India), 70 organisations, several multilateral development banks and financial organisations.

4

A **no-go commitment to hydropower development in World Heritage Sites** by IHA members and a duty of care commitment in Protected Areas.

This progress provides the basis for action in Indonesia in 2023.

world hydropower congress 

Powering Sustainable Growth

BALI 2023
31 October to 2 November
worldhydropowercongress.org



Measuring Emissions from reservoirs: G-res tool

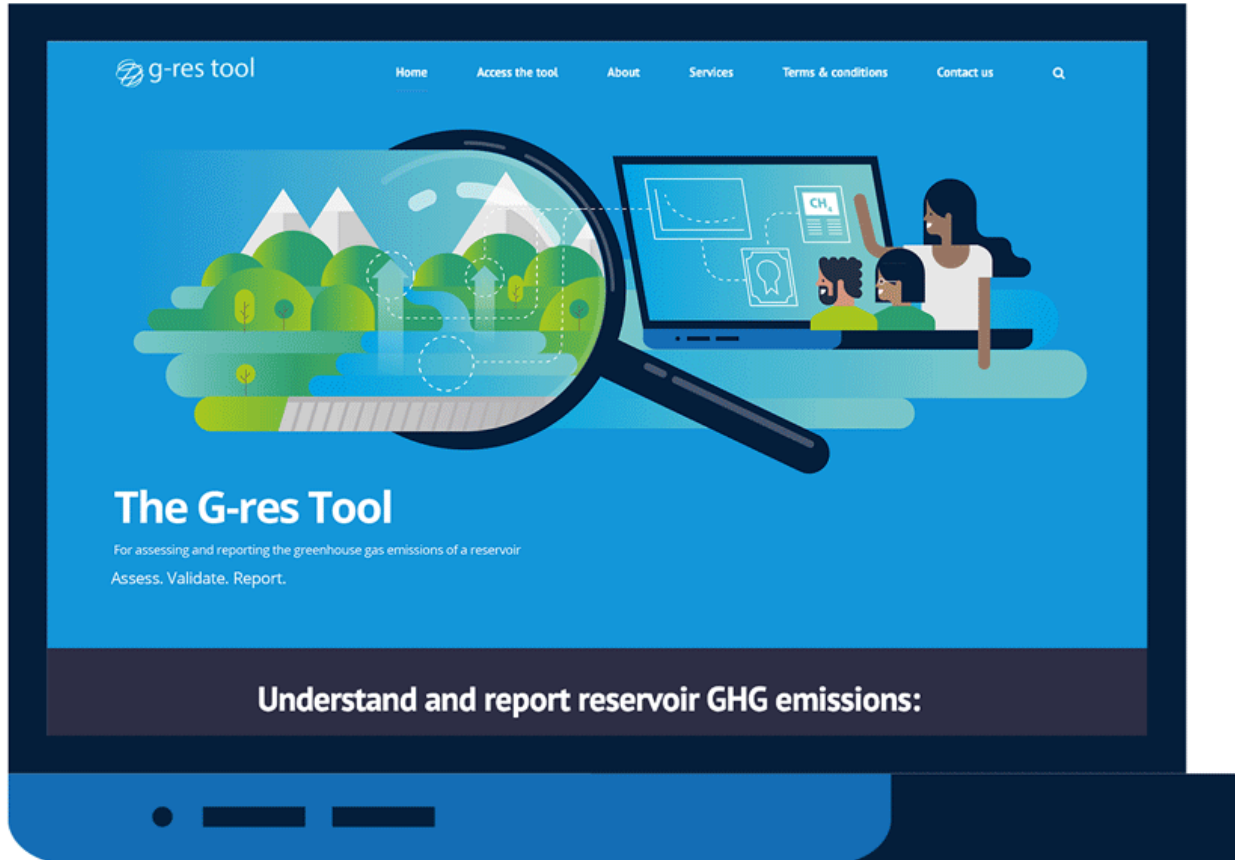
- Evaluation of Greenhouse gas (GHG) emissions from reservoirs
- Simple-to-use, web-based tool launched in 2017
- Services offered:
 - Certified User training
 - ✓ Virtual: April 24-26-28, 2023
 - ✓ Virtual: June 5-7-9, 2023
 - ✓ In person, Bali: Nov 6-8, 2023
 - Validation of results - *required to use G-res Tool results*
 - Assessment of reservoirs

Initiative partners:



In collaboration with:





G-res can be used:

- **Feasibility** stage: to avoid high-emitting projects
- **Design** stage: to implement measures to reduce GHG emissions
- **Operation** stage: to report on GHG emissions

With financial support from:



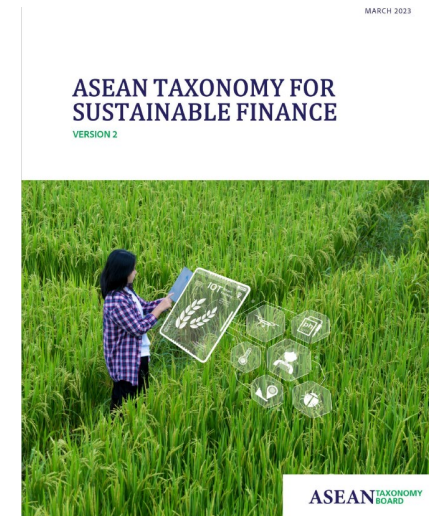
Recognition of G-res tool



Land Sector and Removals Guidance Part 1: Accounting and Reporting Requirements and Guidance

*Supplement to the GHG Protocol Corporate Standard
and Scope 3 Standard*

**DRAFT FOR PILOT TESTING AND REVIEW
(SEPTEMBER 2022)**



Five year strategy to 2027

Key advocacy aims

From 2022-2027 IHA will promote the growth of sustainable hydropower by highlighting the following three messages:

- Hydropower is a driver of sustainable growth. It's role as an enabler of other renewables, as well as a direct provider of firm electricity, should be reflected in policymakers' net-zero strategies (policy).
- Investments in hydropower should be incentivised in financial mechanisms and streamlined licencing (finance).
- Hydropower can be delivered sustainably (sustainability).

Resulting in these three outcomes:

- Hydropower capacity at 1,450 GW.
- Significantly more favourable policy environment for sustainable hydropower development.
- At least 20% of all new hydropower capacity in 2027 certified by Hydropower Sustainability Standard.

Our mission and objectives

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- to position sustainable hydropower as a clean, green, modern and affordable solution to climate change and energy security.

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Who we are

We are the global voice of sustainable hydropower. Our members are committed to the responsible and sustainable development and operation of hydropower.

Operating in over 120 countries, our members include leading hydropower owners and operators, developers, designers, suppliers and consultants.

Currently around a third (450 GW) of global installed hydropower capacity is directly managed and operated by our membership.

Our inputs

- 1 Provide evidence and platforms for advocacy
- 2 Mobilise members and stakeholders to promote change at a global level.
- 3 Build a track record of sustainability under the Hydropower Sustainability Standard.

Our outputs

- 1 Global communications and advocacy.
- 2 Advancing pumped storage hydropower.
- 3 Making the most of existing infrastructure.
- 4 A thriving Hydropower Sustainability Standard including an independent HS Alliance.
- 5 Improving investment Climate including financial mechanisms and permitting.

