



Global Compact
Network
Malaysia & Brunei

Raising the Bar for Renewable Energy: Bakun HEP, Southeast Asia's Largest Hydropower Sustainability Standard (HSS) Silver-Certified Plant

A Case Study of



Knowledge Partner:

PRME Principles for Responsible
Management Education
CHAPTER **ASEAN+**



MONASH
University
MALAYSIA



Project At A Glance

- Project: Bakun Hydroelectric Plant (HEP)
- Location: Balui River, Sarawak
- Ownership: Sarawak Energy (since 2017)
- Certification: Hydropower Sustainability Standard (HSS) – Silver
- Recognition: IHA 2025 Blue Planet Prize



SILVER

Project: **Bakun Hydroelectric Project**
Stage: **Operation**
Date: **August 2025**

As Sarawak's primary electricity provider and Malaysia's largest renewable energy developer, Sarawak Energy has long championed hydropower as the foundation of Sarawak's sustainable growth. The Company's commitment to balancing energy security with environmental and social responsibility was reaffirmed through the Hydropower Sustainability Standard (HSS) Silver certification

for the Bakun Hydroelectric Plant (HEP), one of Southeast Asia's largest hydropower facilities with an available capacity of 2,520 megawatts. This milestone reflects Sarawak Energy's dedication to responsible energy development and demonstrates how sustainable operations can deliver clean, reliable power while protecting communities and ecosystems.

The Challenge

Raising Standards for Responsible Hydropower Development

To strengthen governance and align with global sustainability standards, Sarawak Energy pursued HSS certification for the Bakun HEP. The certification process required addressing legacy environmental and social issues from its 2017 acquisition, improving transparency, and rebuilding trust with affected communities while ensuring continued reliable power generation.

The Action

Driving Sustainability Through Structured Action and Leadership

Sarawak Energy adopted a structured, collaborative and process-driven approach to pursue HSS certification for the Bakun Hydroelectric Plant. This journey was guided by strong leadership commitment, cross-functional collaboration, and alignment with the Company's long-term sustainability roadmap.

The certification process was implemented through five key steps:

1. Champion Leadership and Align Strategy

Sarawak Energy set a clear target to achieve HSS certification for hydropower plants by 2030. This commitment was embedded in the Company's Sustainability Strategy and Roadmap, and SEB Power's Hydropower Roadmap. To lead by example, senior management endorsed Bakun HEP as one of the first projects to undergo certification, ensuring alignment with Sarawak Energy's corporate sustainability goals and long-term decarbonisation pathway.

2. Empower Staff and Engage Stakeholders

Sarawak Energy enhanced internal capacity by equipping employees not only with knowledge of sustainability frameworks and standards, but also with the skills and mindset to become advocates of sustainability practices across operations. These trained staff now serve as sustainability advocates, supporting process owners in integrating sustainability principles into daily operations. At the same time, the Company maintained transparent engagement with local communities, regulators, and other stakeholders

to build trust and gather input throughout the certification process.



Interview session with Bakun upstream community during the Bakun HSS official assessment in 2024

3. Initiate Baseline Evaluation and Implement Governance Structure

A baseline assessment in 2020 evaluated Bakun HEP's operations against hydropower sustainability requirements, identifying key areas for improvement in governance, ESG management, stakeholder engagement, and dam safety. A cross-functional Internal Assessment Team was subsequently established to coordinate corrective measures, monitor progress, and ensure that improvements were implemented in line with certification requirements.

4. Enhance Governance and Validate Compliance

Based on the gap assessment findings, Sarawak Energy implemented targeted improvements in governance, environmental management, and stakeholder communication. Policy updates and enhanced monitoring systems strengthened operational safety and transparency. These measures not only addressed compliance requirements but also elevated Bakun HEP's overall ESG performance in preparation for independent certification.

5. Certify and Improve Continuously

An independent third-party assessment of the Bakun HEP was conducted by a team of Accredited Assessors against the HS Standard, which involves site inspections, documentation reviews and stakeholder interviews. Following certification, Sarawak Energy introduced a continuous improvement plan to ensure sustained performance and knowledge transfer across all hydropower assets — reinforcing its vision for long-term, responsible energy generation.

Through these structured steps, Sarawak Energy transformed the HSS certification process into a catalyst for organisation-wide learning and strengthened governance.

The success of the initiative was underpinned by several key enablers that ensured its sustainability and long-term impact.

Enablers for Sustainability Performance and Impact

The achievement of HSS Silver certification at Bakun HEP was enabled by ten key factors that integrated leadership, governance, digitalisation, and stakeholder engagement. Together, these enablers anchored Sarawak Energy's ability to translate strategy into measurable performance and lasting impact.



Leadership & Culture

Senior management's visible sponsorship of the HSS certification set a clear sustainability pathway, aligning Sarawak Energy with international best practices and fostering a culture of continuous improvement.



Strategy

The certification was strategically positioned to reinforce Sarawak Energy's renewable-energy leadership, enhance ESG performance, and advance the company's low-carbon transition agenda aligned with its sustainability strategy and roadmap.



Process

A structured, cross-functional process coordinated environmental, social, and operational initiatives through regular engagement and shared monitoring tools, ensuring alignment, accountability, and effective execution of HSS requirements.



Resources

The certification was fully financed through internal resources, reflecting Sarawak Energy's long-term commitment to embedding international sustainability standards into core operations.



Governance

Dedicated Sustainability and Community Management Steering Committees have ensured alignment between corporate goals and community priorities, reinforcing transparent and inclusive decision-making.



People

Senior management's commitment inspired broad employee engagement, shifting mindsets from compliance to purpose-led sustainability. This cultural shift fostered ownership and pride in responsible hydropower development.



ESG Data

Robust ESG data systems, supported by quarterly reviews, have strengthened performance tracking and informed strategic decision-making for continuous improvement.



Digital Transformation

Sarawak Energy's Digitalisation Blueprint enhanced environmental, social, and safety-management systems, improving data accuracy and real-time monitoring across the Bakun HEP operation.



Partnerships & Stakeholder Engagement

Multi-stakeholder engagement in community initiatives promoted transparent and inclusive outcomes. Collaboration with UN Global Compact Network Malaysia & Brunei (UNGCMYB) as a strategic partner provided technical expertise and capacity-building support to strengthen delivery effectiveness.



Supply Chain & Procurement

The certification process strengthened Sarawak Energy's supply chain by embedding ESG criteria into procurement, promoting responsible sourcing, and enhancing contractor accountability in line with international best practices.

Overcoming Barriers

Sarawak Energy faced operational, cultural and governance challenges throughout the certification process. The company addressed these proactively through targeted strategies and long-term engagement.

1. Legacy Social Issues

Historical resettlement and Indigenous-rights concerns posed significant challenges. Sarawak Energy implemented the Community Management Plan and formalised MoUs with affected communities, restoring livelihoods and rebuilding trust through transparent follow-up actions.

2. Institutional Capacity

The HSS best practices was integrated into existing functions and business processes, and establishment of the HSS Internal Assessment Team helped to sustain long-term performance improvements.

3. Technical and Regulatory Complexities

Meeting HSS's multi-dimensional requirements and bridging historical data gaps proved challenging. Sarawak Energy responded through targeted training, policy alignment with global standards, and collaboration with regulators to enhance data quality and compliance.

4. Data and Documentation Gaps

Incomplete historical records made validation and traceability difficult. The Company undertook archival research and digitised legacy data, improving documentation integrity and supporting more accurate performance reporting.

Impact and Results

1. Strengthened Governance and Certified Performance

Bakun HEP also has been awarded the International Hydropower Association (IHA) Blue Planet Prize 2025 in recognition of its commitment to sustainable hydropower development. The IHA Blue Planet Prize is awarded to hydropower projects that demonstrate excellence in sustainable development.



Bakun HEP received the Silver Certification award from Hydropower Sustainability Alliance during SAREF 4.0 in 2025

2. Enhanced Environmental and Climate Performance

The certification process helped Sarawak Energy improve its environmental and climate performance:

- **Water quality improved from Class III to Class IIB, indicating cleaner and safer conditions.**
- **Allocated emission intensity for Bakun HEP stands at 39.9 gCO₂e/kWh, far below levels associated with fossil fuel-based generation.**

3. Deepened Community Engagement and Social Outcomes

The Bakun Community Management Steering Committee (BCMSC) created a regular forum for dialogue with local and resettled communities. Over 25 engagement sessions have been held with local leaders, government agencies, and Indigenous groups to strengthen trust and support joint community projects.



Regular meetings with Bakun Community Management Steering Committee (BCMSC) chaired by District Officer of Belaga and attended by the Bakun communities and Sarawak Energy

4. Expanded Capacity Building and Knowledge Sharing

The certification journey helped build skills and shared learning across Sarawak Energy's hydropower operations.



More than **30 training sessions and awareness workshops** were conducted to project teams and process owners



159 employees are **HSS Certified Users**



30 are **Provisional Accredited Assessors**

Experience from Bakun HEP now guides other hydropower projects toward sustainable development and operation.

5. Cultural and Organisational Shifts

Transitioning from compliance-based operations to proactive sustainability required mindset change. Through leadership-champion initiatives, internal communication, and employee recognition programmes, Sarawak Energy fostered ownership and sustained engagement across teams.

Key Lessons Learned

1. Addressing Legacy Issues Requires Long-Term Commitment

Tackling legacy issues demands courage, transparency, and sustained engagement. Sarawak Energy's willingness to confront past gaps and embed corrective actions into its sustainability plans has strengthened community trust and accountability.

2. Sustainability Must Be Institutionalised

Embedding sustainability across governance, operations, and culture ensures long-term continuity. Cross-functional collaboration has fostered shared ownership and accountability at every level of Sarawak Energy's hydropower operations.

3. Bridging Local Frameworks with Global Sustainability Standards

Local frameworks may not always match the pace of evolving sustainability standards. The Hydropower Sustainability Standard provided Sarawak Energy with a clear global benchmark to elevate performance, strengthen governance, and demonstrate regional leadership in responsible hydropower development.

4. Inclusive Engagement Builds Trust and Shared Value

Transparent and participatory engagement has transformed relationships with affected communities from reactive to collaborative. Through platforms such as the Bakun Community Management Steering Committee, Sarawak Energy has rebuilt trust, reduced conflict, and established a model for shared value creation.

5. Strong Data Systems Drive Credibility and Progress

Investing in robust ESG data and digital systems strengthens transparency, traceability, and performance monitoring. Reliable data allows Sarawak Energy to track progress, demonstrate accountability, and reinforce stakeholder confidence.

6. Empowering People Strengthens Institutional Resilience

Building internal capability through structured training and certification empowers employees to take ownership of sustainability goals. This collective sense of purpose enhances resilience and embeds long-term sustainability into Sarawak Energy's culture.



To date, SEB has 30 Provisionally Accredited Assessors (PAA) and 6 Accredited Assessors (AA)

Sarawak Energy has been a participant of the UN Global Compact since 2022, including as a:

- Participant in the Forward Faster Initiative (2023–present)
- Recipient of multiple recognitions at the Forward Faster Sustainability Awards 2024, including categories for Climate Action and Finance & Investment

UNGCMYB served as Sarawak Energy's strategic implementation partner, providing technical guidance and capacity-building support to align governance and operations with the UN Global Compact's Ten Principles, thereby strengthening sustainability and social impact practices.

“ This recognition (Bakun HEP HSS Silver Certification) acknowledges Sarawak Energy's commitment to responsible and sustainable energy development and supports Sarawak's ambition to export sustainability-certified renewable energy, contributing to a just and equitable energy transition. It also reflects the vertically integrated utility's alignment with the principles of the San José Declaration on Sustainable Hydropower. ”

Datuk Haji Sharbini Suhaili,
Group CEO, Sarawak Energy



THE TEN PRINCIPLES OF THE UNITED NATIONS GLOBAL COMPACT



HUMAN RIGHTS

- 1 Businesses should support and respect the protection of internationally proclaimed human rights; and
- 2 make sure that they are not complicit in human rights abuses.



LABOUR

- 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- 4 the elimination of all forms of forced and compulsory labour;
- 5 the effective abolition of child labour; and
- 6 the elimination of discrimination in respect of employment and occupation.



ENVIRONMENT

- 7 Businesses should support a precautionary approach to environmental challenges;
- 8 undertake initiatives to promote greater environmental responsibility; and
- 9 encourage the development and diffusion of environmentally friendly technologies.



ANTI-CORRUPTION

- 10 Businesses should work against corruption in all its forms, including extortion and bribery.

The Ten Principles of the United Nations Global Compact are derived from: the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption.

ABOUT UN GLOBAL COMPACT NETWORK MALAYSIA & BRUNEI

United Nations Global Compact (UNGC) is a strategic policy initiative for businesses that are committed to take actions to advance broader societal goals. UN Global Compact Network Malaysia & Brunei (UNGCMYB), the official country network of UNGC, is the leading advocate for business sustainability action in Malaysia and Brunei. We empower both corporates and SMEs through value-creating initiatives across learning, connections, and enablers to Forward Faster a collective sustainable future. We support Malaysian and Bruneian companies in aligning with the Ten Principles and contributing meaningfully to the Sustainable Development Goals (SDGs), while providing access to partnerships, tools and knowledge sharing to advance responsible business practices.

Talk to us about joining us or visit our website at www.ungcmlyb.org



**Global Compact
Network
Malaysia & Brunei**

📍 B-8-3A, Block B West, PJ8
Office Tower, Jalan Barat, Pjs 8,
46050 Petaling Jaya, Selangor

☎ 03-2935 9051
✉ info@ungcmalaysia.org

Johor Office

📍 No. 51B, Jalan Impian Emas 5/1,
Taman Impian Emas,
81300 Johor Bahru, Johor

☎ 07-571 2016
✉ info@ungcmalaysia.org