



International Centre  
for Hydropower

# ICH 2021 Annual Report



# Contents

3	Chairman's Note
4	Managing Directors note
5	The Board
6	The Secretariat
7	ICH Impact
8	Head of studies – Four lenses of innovation
9	Key Figures 2021
10	ICH Courses in 2021
11	International Course Portfolio”
12	Africa
13	Asia
14	Latin America
15	ICH Members



# Chairman's Note

## **Kjell Repp**

Chairman of the ICH Board of Directors



Whilst we are still not yet out from under the shadow of the pandemic, there is much to be grateful for when reflecting on the ICH mission. With the adoption of online delivery for our capacity building activities, we were able to deliver 29 courses in 2021 and have strived to continuously improve our methodology. Online delivery will remain an important mechanism for the future and the team are working continuously to develop relevant courses keeping ICH at the forefront of a strategic shift towards sustainability and adding value to hydropower. Keeping sustainability in mind, it is important to find the right balance between online and on-site courses.

From our experience online delivery can seldom fully replace the on-site courses, where we meet face to face, and the students are exposed to the “real” problems and operational challenges of energy production. This balance will depend upon the type of course. With more practical and operational courses, heavier emphasis will be placed upon demonstrations, group tasks and visits to power plants, compared to more theoretical courses, like financing and legal aspects where much progress can be made online.

Continuing to deliver a wide range of program activities has required significant and persistent effort and collaboration. It is the generosity with time, knowledge and energy of our ICH team as well as the resource persons, participants and our partners that has led to another successful year.

The sharing of knowledge through collaboration is a core value of ICH. On behalf of the board, I would like to thank everyone who has been involved in the development and delivery of the courses that continue to build human capital and contribute to the broader development agenda facilitating access to energy throughout the world.

A handwritten signature in blue ink, appearing to read 'Kjell Repp'.

” The sharing of knowledge through collaboration is a core value of ICH.



## Knowledge as Capital

### **Line Amlund Hagen**

Managing Director, ICH

As disruptive as the pandemic has been, it is this which has prompted us to develop stronger strategic alliances and continue to build resilience not only in our teams but also in our networks. Our aspiration is to continue to be a driving force in developing the human capital needed to plan and implement successful, sustainable energy projects.

Norwegian expertise continues to be in global demand and with organisations such as STATKRAFT and SCATEC leading the way, the business case for sustainability in hydropower has never been stronger: I am proud to announce that new initiatives are under development. This will include a new e-learning program focused on the dimensions of sustainability. This was born out of an initiative seeking to update knowledge and raise awareness of the potential for hydropower to contribute to building environmental, economic, financial, and social capital. Over time, the e-learning course will become a pre-requisite for all ICH courses and will be launched during 2022.

This report sets out how we have adapted to the ongoing challenges of delivering our programmes online, how we measure the impact of our work and how the different regions we work in have responded to the needs of our stakeholders.

There is no denying that the last two years have been demanding. When 2021 started off as 2020 ended with strict limitations to how we could operate, both the ICH-team and our students were hit by a serious case of internet fatigue. It has become increasingly clear that we need the energy that only meeting people face to face can provide. This however does not mean that the last years endeavours have been in vain, we now know both the possibilities and the limitations of online training.

**These are valuable insights that we will use in the years to come to provide even better training experience for our students!**

” Energy connects us, ICH keeps us together

# The Board

## DIRECTORS



**Kjell Repp**  
Chairman



**Christine Birkeland**  
Deputy Chairman – Norwegian  
Energy and Water Resources  
Administration (NVE)



**Einar Kobro**  
Energi Norge



**Bjarne Børresen**  
Multiconsult AS



**Leif Lia**  
NTNU

## DEPUTY DIRECTORS



**Ole Gunnar Dahlhaug**  
NTNU/HydroCen



**Hans Arild Bredesen**  
Bredeesen Consulting



**Stephen Sparkes**  
Statkraft



**Gunn Vik**  
NORWEP



**Halvor Haugsvold**  
Norconsult

Five board meetings were held in 2021. The pandemic gave us all a break during the summer months, the board managed to meet in person on two occasions in 2021. The other meetings, including the Annual Meeting with our members were held on-line.

The discussions in the board during the first half year of 2021 concentrated on the negotiations with Norad on the new contract for the next five years period. The new contract was signed on 30. June 2021 and will run until 31. December 2026. Furthermore, the handling of the COVID-19 crisis and the necessary adjustments of the course portfolio were frequent topics at the board meetings.

### The 2020–2023 Election Committee comprises:

Øivind Johansen, OED (Ministry of Petroleum and Energy), (Chair)  
Odd K. Ystgaard, Norconsult AS  
Vegard Willumsen, Multiconsult

Elections for the Board of Directors were held at the Annual Meeting on 23rd March 2021.

# The Secretariat



**Tom Solberg**  
Project Director

**Carole Rosenlund**  
Head of Africa

**Line Amlund Hagen**  
Managing Director

**Laura Bull**  
Head of Studies and Latin America

**Monde Lisulo Hamududu**  
Project Manager

---

The online delivery of our courses continued to require effort and hard work from the whole team. Continuing into 2021, the Covid-19 restrictions in Trondheim resulted in the ICH office being unmanned most of the time as the staff worked from their home offices.

Throughout 2021 ICH engaged outsourced professionals for accounting, auditing, ICT and other administrative tasks.

## ICH Mission

- To develop and implement training and capacity-building activities in renewable energy with an emphasis on hydropower.
- To collaborate with key Norwegian partners for effective implementation of the government's commitment to clean energy development; and to strengthen networks between the public and private sectors to mutually benefit members and the implementation of ICH activities.
- To contribute to institution building and improved management through the dissemination of knowledge on hydropower and other renewable energy sources.
- To provide services to Norwegian and foreign partners of high international quality in courses and conferences that are in line with current guidelines for Norwegian development assistance activities.

# ICH Impact

ICH has developed a structured monitoring system which collects data from all courses delivered. This covers not just demand for courses but also effectiveness and measuring change from the participants perspective as well as employers.

A baseline data set has been developed for each region which sets out the specific needs, refined by dialogue with stakeholders. Courses are then tailored to each region but subject to the same monitoring framework, linking the actions taken to measurable change and evaluating each component of the course delivery in a continuous improvement cycle.

Targets for attendance have been consistently reached but it is the change observed in workplaces that is perhaps the most satisfying. Participants universally rated the usefulness of the course at 4.5 out of 5 and in 2021 – reporting that it had benefitted their career. Employers of those who had attended the courses were also overwhelmingly positive about the impact of the training. With 98% of employers reporting a benefit to their employee this is a resounding endorsement for the portfolio of courses. There were also high levels of reports of sharing of knowledge and of positive change within the organisation.

The participation of women has long been a key ICH target, the target was set at 25% of participants and this has been exceeded at 36% in 2021. 38% of the lecturers in 2021 were women and ICH has actively sought to increase this figure further by drawing on ICH alumni and its networks.

ICH goes further that just outputs, tracking outcomes and impact with a measurable increase in knowledge when comparing pre and post training scores. Feedback is also collected around specific course elements to allow for continuous improvement. Sharing of case studies and a regional approach was highly regarded by participants as was the opportunity for field visits. A need to rationalise and include focussed, technical courses was also highlighted and will be incorporated into future courses. The whole team at ICH look forward to supporting your continuing professional journey.

Energy connects us,  
ICH keeps us together!

PREVENTION AND ADMINISTRATION OF SOCIAL AND ENVIRONMENTAL CONFLICTS IN THE RENEWABLE ENERGY SECTOR

**"CONFLICT TRANSFORMATION"**

Module II - ONLINE

**New course!**

3 - 7 May, 2021

ICH, Norad, University of Edinburgh

Gestión de Género III

**Conexión para la acción**

Avanzando en la gestión de género en el sector hidroeléctrico y otras energías renovables

LATAM 2021

**1 al 3 de diciembre 2021**

Modalidad: virtual | Plataforma: Zoom

Fecha y hora límite para enviar confirmación y registro: 26 de noviembre de 2021 a las 11:55 p.m., Bogotá, Colombia, Lima, Perú.

ICH, Norad, University of Edinburgh

Energy connects us,  
ICH keeps us together!

PREVENTION AND ADMINISTRATION OF SOCIAL AND ENVIRONMENTAL CONFLICTS IN THE RENEWABLE ENERGY SECTOR II - PREMACA II

**"CONFLICT TRANSFORMATION"**

ASIA EDITION

Module II - ONLINE

7-11 June 2021

Registration Deadline 30 May

ICH, IFC, Australian Aid, Norad, University of Edinburgh, Ministry of Economy and Finance

Energy connects us,  
ICH keeps us together!

**ENVIRONMENTAL AND SOCIAL MONITORING IN HPP**

Module I - ONLINE

**New course!**

22- 26 March, 2021

ICH, Norad, University of Edinburgh



## Four Lenses of innovation

**Laura C. Bull**  
Head of Studies, ICH

In our connected world, change is constant, and the pandemic has accelerated this. It has demanded we adapt our ways of working and communicating. ICH has responded by transforming our course delivery methods and continue to review their effectiveness and impact.

The development of truly sustainable energy requires a broad view and ICH has developed a framework for course delivery which encompasses human, financial, physical, social and natural capital. This fits well with the work of Rowan Gibson who describes 'Four Lenses of Innovation' which have formed the direction of ICH training in sustainability. He describes a need to challenge orthodoxies, take advantage of trends, understand needs and lever resources.

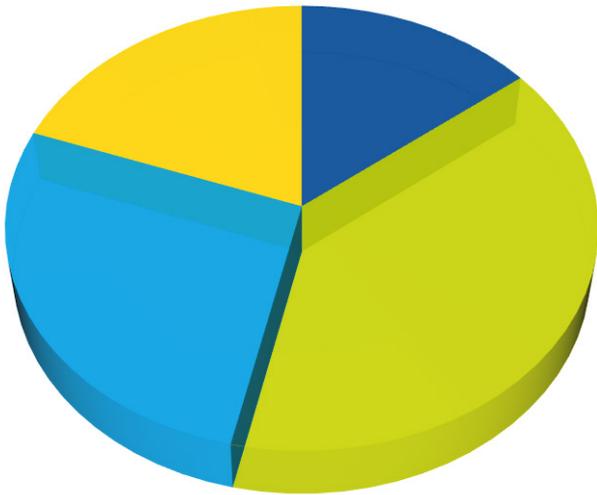
Strengthening the business case for a broader view of sustainable hydropower requires a new generation of practitioners who are willing to question and lead, challenging out-dated models of project development which placed limited emphasis on sustainability. Project development must satisfy a wider range of criteria beyond a financial return. This is reflected in the demand for courses relating to social and environmental issues.

To be able to respond to trends, ICH actively seeks representation throughout its network. This has enabled agile and tailored course delivery, uniquely suited to the regions and their challenges. The contacts that ICH has fostered also enables needs to be understood, to be seen in context and matched with capacity development. Our alumni have the potential to play an active role in course delivery with many participants returning for further training and reporting a positive impact in their workplace.

Development of all energy projects offers a powerful opportunity to lever resources towards communities impacted, seeking synergy with other renewables, offering wider development prospects and access to opportunities. Benefit sharing and the development of thematic bonds will continue to bring these issues to the fore at a community, territory, and regional level.

ICH is ready to respond to these needs and we look forward to 2022 where our new international courses on sustainability and resettlement will be delivered. We do hope that we will be able to return to some on-site training by the end of 2022. It is clear that a hybrid of online and on-site training will be the best model for reaching the widest group possible.

KEY FIGURES 2021



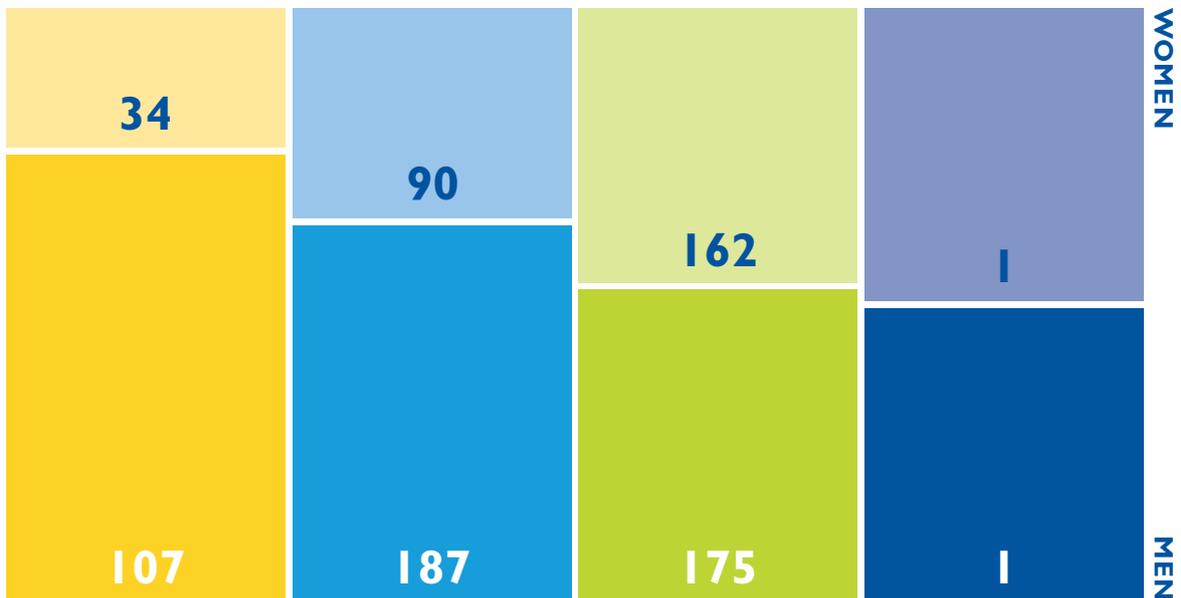
**205** Operation and Maintenance

**147** Project Management

**296** Environmental and Social

**109** Energy Policy

“The new approach provided a unique experience that transcended borders, languages and cultures.”



**AFRICA**

**757**  
participants

**ASIA**

**29**  
courses

**LAC**

**37%**  
women

**OTHER**

**37**  
countries

# ICH courses in 2021: Promoting sustainable hydropower development throughout the world.

## Africa/Online

Introduction to Asset Management and its Application to Hydropower in Africa	3 - 5 May
Instrumentation and Monitoring for Dam Safety	6 - 12 May
Environmental, Human Rights & Governance Considerations in Renewable Energy Projects – Impact Assessment Context	7-10 June
Financial Modelling, PPA Structuring and Negotiations	28 - 30 June
Revenue Protection Management	22 - 26 November
Operation and Maintenance	29 Nov - 3 Dec
Sediment Management	2 - 8 December

## Rwanda/Online

Sustainable Hydropower Development and Operation Module 2	15 - 19 February
---	------------------

## Asia/Online

PREMACA - Module II: Conflict Transformation	7 - 11 June
Gender Asia with IFC	23 - 26 November

## Bhutan/Online

Financial Modelling Follow Up	27 - 29 April
Project Development	27 May

## Cambodia/Online

Financial Modelling Refresh Cambodia	20 - 22 April
Dam Safety	16 June

## Indonesia/Online

Waterway Management	2 - 3 June
---------------------	------------

## Nepal/Online

Gender Impact Assessment Asia with ICH Part I	10 - 12 February
Financial Modelling Follow Up	3 - 5 May
Turbine Testing Lab	8 December

## LAC/Online

PREMACA Module II-Part I Transformacion de Conflicto- Nivelacion ANLA (Conflict Transformation)	18 & 30 June
Entrenamiento de Género – Proyecto Hidroituango: Evaluación del curso	18 - 20 August
Seguridad De Presas en America Latina V - Curso Virtual: Rehabilitación y Modernización. Modulo I	23 - 27 August
Power Markets III Colombia Module II	8 - 9 September
Gender LAC III	1 - 3 December

## Colombia/Online

Power Market III Colombia Module I	14 - 15 April
Power Markets III LAC	18 - 19 November

## Costa Rica/Online

Monitoreo Ambiental y Social en Proyectos Energéticos: Módulo II La Supervisión Ambiental y Social	21 - 23 June
--	--------------

## International/Online

International, Environmental and Social Monitoring in HPP Module I	22 - 26 March
PREMACA - Module II: Conflict Transformation	3 - 7 May
Small Hydro Development	31 May - 4 June

# INTERNATIONAL

Three courses were delivered in 2021 under the International Course Portfolio, two related to the Environmental and Social Issues and Human Rights cluster and one Project Management. All three courses were delivered online.

The pandemic has created a challenging situation for the energy sector. Operations have been disrupted. It has tested resilience with a decrease in demand, volatile prices along with operational challenges. The first course under the ICH International Norwegian portfolio – **Environmental Monitoring** - was a pilot course delivered in March 2021.

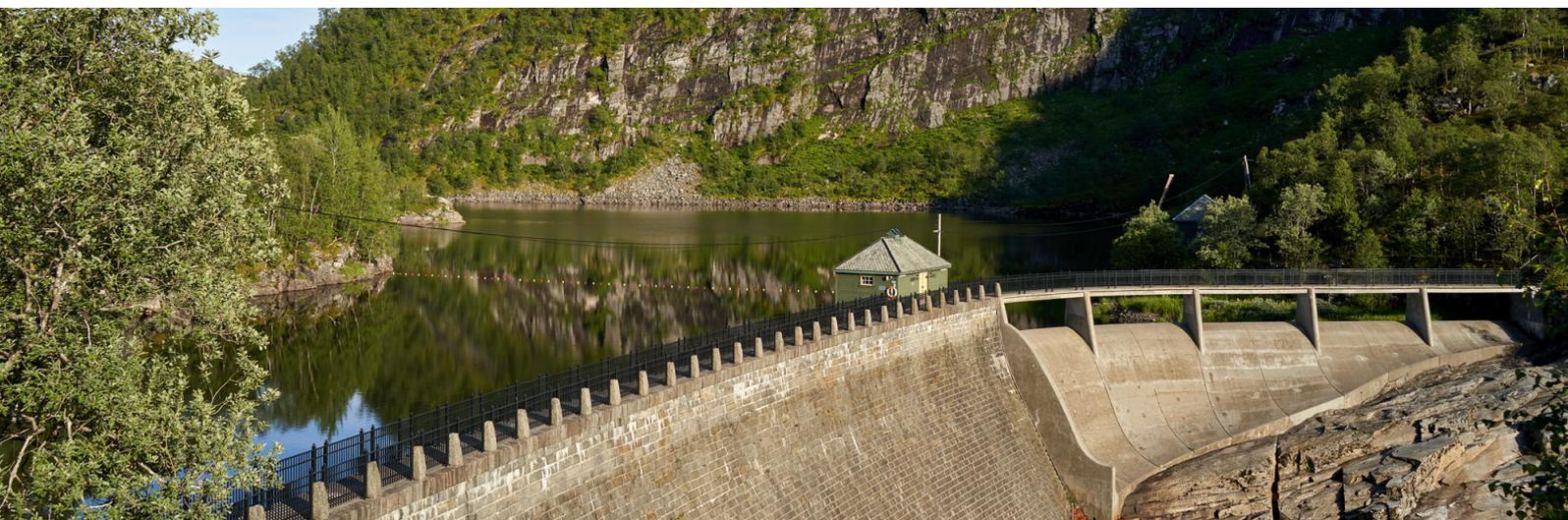
The course provided a foundation of sustainability concepts related to the whole project cycle, including planning, construction, and operations. With a focus on safeguards and the tools required to develop the indicators and verification methods to show compliance, real world examples illustrated the cross-cutting issues. An innovative approach to Natural Capital was presented, designed to ensure the continuity of ecosystem services.

**The Prevention and Administration of Social and Environmental Conflicts in the Renewable Energy Sector II- PREMACA II “Conflict Transformation”** was delivered in May where conflict was presented as a social phenomenon and a process. This process can be transformed, but strategies are needed to identify the stage in the conflict cycle and tailor actions to the specific circumstances. This course builds on conflict resolution

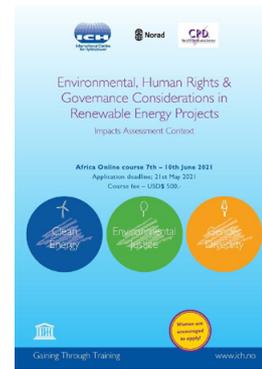
(module I) moving towards transformation of conflict. The course delivered high impact tools to resolve the driver of the Conflict. Based on empathy and creating culturally appropriate value. In one week, the course integrated theory with practice including the risk of reprisals, climate variability, creating value out of conflict, Indigenous peoples' identity, and their dependence on natural resources in river basins.

The **Small Hydropower Development** course was held at the end of May. The course covered the essential environmental and economic issues in the pre-feasibility phase of small hydropower to improve sustainability. Course participants explored solutions for small hydropower projects from a civil, mechanical and electrical engineering perspective.

The course provided updates on technological advances in recent years, both in penstock drilling, intake design, and other trends in turbine and powerhouse design as part of the training assignments. The importance of reliable data on water was presented along with the main principles of hydrological sciences and how they should be applied to hydropower projects.



# AFRICA



Africa has an abundance of renewable energy resources which can be harnessed to overcome existing energy deficit challenges.

Hydropower is at the forefront of these options, versatile enough to meet the rapid increasing demand for affordable quality energy, as well as foster economic growth and social development. ICH offered eight targeted training programs in 2021.

The year began with module 2 of **Sustainable Hydropower Development and Operations**. The course offered an in-depth focus into key aspects of sustainability and included a comprehensive case-study based on an existing project in the region.

Aging hydropower plants coupled with inadequate power infrastructure remain a challenge for Africa, hampering efforts to optimize the full potential of resources for the generation and supply of electricity. **Introduction to Asset Management and its Application to Hydropower in Africa** training focused on the fundamentals and concept applications of asset management in hydropower, demonstrating Asset Management policies, strategies and systems that support the effective management of hydropower assets.

Directly complementing the existing ESIA programs and set to ready the region in positioning itself to better harness the advantages of having ESG values and being human rights compliant was a four-day pilot course on **Environmental, Human Rights and Governance Considerations in Renewable Energy Projects – Impact Assessment Context**. This course introduced participants to the integration of human rights principles, risks assessment and governance in the development processes of renewable energy projects.

Developing robust O & M strategies and practices are key to ensuring the longevity and safe operations of a hydropower facility. Building on the fundamentals covered in previous Dam Safety Africa trainings, a pilot course on **Instrumentation and Monitoring for Dam Safety**

ran in May. Further topics related to this cluster were covered during a five-day **Operation and maintenance of hydropower facilities: From strategy to execution** training. Participants were offered a detailed insight of the concepts of operation and maintenance of hydropower plants with best practice practical examples. Properly maintained and efficiently operated hydro-power facilities can increase energy production and significantly improve income and business results. Sentiments also conveyed to participants at the ensuing training on **Reservoir Sediment Management for Sustainable Hydropower** which introduced them to cost-effective, innovative, technical solutions to handling reservoir sedimentation for optimum benefits of the water resources. Sustainable sediment management requires a capacity both in terms of resources and trained manpower; - an essential priority for Africa.

Africa's vast energy resources remain largely untapped due to the chronic lack of finances and barriers to investment. Developing a well formulated financial model as part of is vital for project evaluation and facilitates sound investment appraisals and informed business decisions. To strengthen capacity on this front under the Project Management cluster, a three-day course on **Financial Modelling, PPA Structuring, and Negotiations** was hosted, presenting a robust platform for analysis of the planning process of a project, with emphasis on financial considerations as well as legal and institutional framework.

The **Revenue Protection, Infrastructure Security and Metering** course was a comprehensive and interactive training focused on reducing revenue leakages in electricity utility companies. The course offered strategic direction on Revenue Protection and Infrastructure security, alongside practical interventions for planning and developing Revenue Protection solutions.

# ASIA

The work in Asia relating to gender in hydropower continues to develop. From the course cluster on Environment, Social and Human Rights, the year began with **Gender Impact Assessment Asia Part I**. 10th to 12 February 2021.

This was part of the International Finance Corporations (IFC) 'Powered by Women' programme in Nepal, ICH joined forces to deliver a three-day training on Gender in ESAs as Nepal's commitment to engage women in communities as stakeholders. Hydropower companies, members of ICH and strategic clients of IFC explored practical tools and approaches to integrate gender into infrastructure projects and enhance sustainability outcomes.

This important work continued to advance with **Gender Inclusiveness in the Power Sector** which was delivered in November 2021. Examples were presented from the IFC Powered by Women initiative showcased to demonstrate the progress of Nepal's hydropower industry in leading positive change by engaging women as leaders, employees, and stakeholders towards sustainable outcomes.

The final course of the year in this cluster was **Prevention and Administration of Social and Environmental Conflicts in the Renewable Energy Sector II (PREMACA) "Conflict Transformation."** Which was adapted and oriented towards Asia. The objective of the online course was to provide participants with fundamental knowledge and deliver high impact tools to resolve the driver of the conflict within an Asian context.

The project management cluster saw further work on **financial modelling** in Bhutan, Nepal and Cambodia held in April and May. These refresher courses built on the previous year's training and aimed to cement the information previously acquired, as well as preparing for selecting a group from these three countries to take part in an advanced level program to be held as an onsite event in 2022.

The online portion of a 2-part course on Project Development was held for a group of Bhutanese participants in May. This was meant as a primer for the onsite course that was planned for later in the year, but the covid restrictions in Bhutan prevented this part of the training taking place. However, this training is now scheduled to take place in the second half of 2022.

The operations and management cluster saw three courses delivered. **Dam Safety** for Cambodia was divided into an online primer session plus an onsite main part planned for December. The online part was delivered in June, but for the onsite part the arrival on the world scene of the Omicron variant resulted in cancelled travel plans and this part has been rescheduled for late 2022.

**Waterways Management** for Indonesia ran in early June. This course aimed to give the participants a thorough understanding of the concepts of waterway management of hydropower plants with best practice practical examples. The second onsite part of the training had to be postponed due to the pandemic situation in Indonesia and is now planned for 2022, provided the pandemic restrictions on travelling now will be eased later in the year.

Finally, an online session in partnership with the **Turbine Testing Lab** of the Kathmandu University was delivered for Nepal on the 8th of December. This one-day event discussed the Digitalization and Flexibility of Hydropower Plants and had 30 participants from the university departments as well as from the hydropower industry in Nepal.





# LATIN AMERICA

While the hydropower assets in emerging markets is younger than in developed countries, there is a sizeable number that are already over 40 years old. This has led to a need to assess the feasibility of rehabilitation to improve efficiency and extend their useful life rather than simply increasing the number of plants.

August saw a new Pilot Course in the Dam Safety Series - **Rehabilitation and Modernization** was delivered online. This gave participants the opportunity to share the different regulatory frameworks and key requirements related to rehabilitation or modernization of multipurpose exploitation works and hydropower power plants in the region.

The Environment, Social and Human Rights cluster continued to advance in the region with the delivery of an **Environmental and Social Monitoring Module II** course in June. This emphasized the importance of social and environmental supervision to demonstrate compliance and updating plans as part of a continuous improvement approach.

Two modules of **Prevention and Administration of Social and Environmental Conflicts in the Energy Sector (PREMACA), Module VI Public Consultation process-Colombia** were delivered in June. This is a new course building on the advances achieved in LAC in the last five years. Some LAC countries are advanced in conflict resolution and have been able to leverage hydropower projects as a positive catalyst. Prior-consultation processes allow Indigenous Peoples to be informed of administrative, legislative and AOP decisions (projects, works or activities) that may affect them. This theme is developed through the inclusion and participation promoted by the Colombian National Government.

Further strengthening the sustainability agenda was central to the online **Gender Training LAC III**. Part I was a tailor-made courses for staff from the Ituango Hydropower Project team in collaboration with IBD Invest – Colombia. Part 2 focused on the business case for gender management in projects. Creating Social, Environmental and Economic value in Latin America and was delivered between the 1st to the 3rd of December.

Leading the way in energy mix transformation in the LAC region was a three parts series in the energy policy, markets, and trade course cluster. The course **POWER MARKET III Colombia 2021** was delivered in three parts in conjunction with the Norwegian Embassy in Bogota. **Part I Hydrogen** ran in April (online), **Part 2 Geothermal** in September 2021 (online) and **Part 3 Future Power Markets III LAC** in Bogota in November 2021 (hybrid).

This course was supported by a team of experts drawn from, NORDPOOL, SINTEF, IDB and IBD Invest, ACOLGEN, Generadoras de Energía (Chile), Statkraft Chile, Statkraft Peru, Nel Hydro and Statkraft. The goal is to facilitate tools for a roadmap for the Colombian government and ACOLGEN members can follow to redesign and upgrade the existing system.

# ICH Members

## Norwegian members



Bærekraftig Investering AS



Norconsult AS



EAST AFRICAN POWER LTD

Dynavec AS



NVE (Norwegian Water Resources and Energy Directorate)



Scatec



Energi Norge



NTNU - Department of Civil and Environmental Engineering



Statkraft AS



Multiconsult AS



OED (Norwegian Ministry of Petroleum and Energy)



SWECO Norge AS



Noord Pool Consulting



Volue AS



Trønder Energi Kraft AS



Tinfos

## Mutual members



CELAPEH (Centro Latinoamericano para la Pequeña Empresa, Colombia)



IC-SHP (International Center on Small Hydro Power)



NORWEP (Norwegian Energy Partners)



HydroCen



IHA (International Hydropower Organization)



NABA (Norwegian-African Business Association)

# International members



Acolgen



AURSA



CIMEQH - Colegio de Ingenieros



ENEE- Empresa Nacional de Energia Eléctrica



Agro Engineering Works Pvt. Ltd.



AVCV Management Consultancy



Di Avante



Energy Development Council (EDC)



ACOPE



BFL Latinoamerica, B Fouress (P) Limited



EDL Generation public company



Energy Regulatory Commission - ERC



Alternate Hydro Energi Centre



Butwal Power Company LTD - BP



Druk Green Power Corporation



Environmental Resources Group Pvt. Ltd, NEPAL



AHPPER - Asociación Hondureña



CDL (Consejo Departamental de Lima del Colegio de Ingenieros del Peru)



EAST AFRICAN POWER LTD



Escom, Malawi



Arusha Technical College ATC



Central Engineering Conculancy Bureau - CECB



Electricidad de Cortés - ELCOSA



FEDEAGRO S.A.



Aryabhata Group of Institutes



Celsia S.A.E.S.P



Electricite du Cambodge EDC



Frontier Energy



Asociación Hondureña de Energía Renovable (AHER)



Cemedar



Electricity Control Board - ECB



Hydro Lab Pvt. Ltd



Asociacion Salvadoreña de Energías Renovables - ASER



Empesas Públicas de Medellín EPM



Himal Power Ltd.



HMV Ingenieros Ltda



Institute of energy studies and research (IESR) - (KPLC)



Kafue Gorge Regional Training Centre - KGRTC



NACEUN



Hobuka



Institute of Water Resources Planning



Kaizen Africa Ltd



Newplan Ltd



Hydroambiental Consulting S.A



Instituto Costarricense de Electricidad -ICE



Makerere University



Sanima Hydropower Ltd



Independent Power Producers Associations Nepal IPPAN



INTEGRAL S.A.



Kenya Electricity Generation Company Ltd - KENGEN



Payandab Taven Consulting Engineers



Hydroelectricity Investment and Development Company Limited (HIDCL)



Iran Water and Power Resources Development Company - IWPCO



Ludhiana Holdings



PBP Power Business Partner



Ingetec



ISAGEN S.A. ESP



LUNSEMFWA HYDRO POWER COMPANY LIMITED (LHPC)



SAPP (Southern African Power Pool)



Institut de Technologie ITC



Jammu and Kashmir energy development agency (JAKEDA)



Mercados Electricos de Meso-america S.A. - MELECSA



SARDC



Mulanje Renewable Energy Agency - MuREA



Savimaxx Ltd.



SEDIC S.A.



TETYS International PJS



Zambezi River Authority



TANESCO Limited, Head Office



UEGCL



ZESCO



SIGET



UETCL



Sustainable Strategies



University of Dar es Salaam,  
Department of Civil Engineering



Sustainability Framework



University of Medellin



Tanahun Hydropower Limited



Volta River Authority

# Gaining Through Training



Norad



International Centre  
for Hydropower



## International Centre for Hydropower

S P Andersens veg 7, 7031 Trondheim, Norway

[www.ich.no](http://www.ich.no)

### Stay connected to us:



International Centre  
for Hydropower – ICH



International Centre  
for Hydropower