Eighth International Conference and Exhibition on Water Resources and Renewable Energy Development in Asia

Shangri-La Hotel, Kuala Lumpur, Malaysia ~ 8 to 10 December 2020

Organized by:

Supporting Organizations include:
MISSION OF ASIA 2020

As with the previous conferences in this series, which took place in Bangkok, Danang, Kuching, Chiang Mai, Colombo, Vientiane and Danang (again), the emphasis will be on helping to turn renewable energy and water resources development policies into practice. By bringing together a multidisciplinary group of international experts, to focus on issues of specific relevance to Asia, we aim to stimulate new partnerships, and produce concrete outcomes from the sessions and workshops. All those engaged in promoting, planning, financing, developing, constructing, supplying or studying water resources and renewable energy schemes in Asia should attend.

WELCOME TO MALAYSIA

The Aqua-Media International team, with the support of the Malaysian Government, the Malaysian Committee on Large Dams, and the State Power utilities, welcomes the global water and energy community to the vibrant, multicultural city of Kuala Lumpur, Malaysia.

Peninsular Malaysia, as well as Sarawak and Sabah, have broad experience of large and small hydropower development and multipurpose dams. Study tours will visit some of the large cascade developments in Peninsular Malaysia. Hydropower supplies about 20 per cent of Malaysia’s approximately 34 GW of installed generating capacity, with hydro supplying more than 20 TWh/year. The Government of Malaysia is strongly committed to increasing the share of renewable energy in the country’s generation mix, with a target to add 4 GW of renewables across the thirteen states by 2030.

The country has about 104 large dams. The most recently completed in Peninsular Malaysia are the Puah dam for the 250 MW Hulu Terengganu hydro plant (completed in 2015), and Susu RCC dam for the 372 MW Ulu Jelai hydro plant (commissioned in 2016). The latest large scheme going ahead in Sarawak is the 188 m-high Baleh CFRD, following the completion of Bakun and Murum. Some of the most important schemes in Peninsular will be visited during post-Conference study tours.

KUALA LUMPUR

The host city is easily accessible from all parts of the world: Kuala Lumpur International Airport is one of the leading aviation hubs of Asia, with direct flights operating there by more than 70 airlines.

While being surrounded by lush rain forests not too far away, Kuala Lumpur, the capital city and cultural, financial and economic centre of Malaysia, is one of the fastest growing metropolitan regions of Southeast Asia. The city skyline is dominated by the gleaming Petronas twin towers, and numerous state-of-the-art office blocks and hotels. But some traditional Malay buildings and colonial-style architecture can also be found, as well as the colourful markets in the Bukit Bintang and Chinatown areas.

The Shangri-La hotel, in the heart of the city, will provide a comfortable and elegant setting for the conference.
The following pages show details of confirmed sessions and speakers. Additional speakers and panellists are being invited, and details of updates will be posted regularly on our website (www.hydropower-dams.com)

**Tuesday 8 December ~ Morning**

**Opening Plenary Session**
- Welcome to ASIA 2020 and introduction to the programme – Alison Barrle, Director, Aqua-Media International Ltd, UK
- Opening addresses by:
  - Michael Rogers, President, ICOLD
  - Felix Reinders, President, ICD
  - Datun Prof Ir Dr Lariyah Binti Mohd Sidek, President, MYCOLD
  - Dr Lois Faulcon, President, World Water Council
  - Nils Nielsen, IFA-Hydro
  - Officers of TNB/Unites and Sarawak Energy

**Coffee break and official opening of the ASIA 2020 Exhibition**

**Plenary Session Part 2 – Keynote addresses will include**
- Dam safety experiences in my 40 year career in hydropower and dams
  – Michael Rogers, President, International Commission on Large Dams
- World Bank strategy and lessons learned for dam safety – Satoru Ueda, Lead Dam Specialist, The World Bank
- Future hydropower in the post-2020 world – Asit K. Biswas, Lee Kuan Yew School of Water Policy, Singapore

**Tuesday 8 December ~ Afternoon**

**Session 1 - Change and complexity in hydropower finance: From MDBs and PPPs to bilateral debt**
- Chair: Dr Judith Plummer Breeckman, University of Cambridge, UK
- The scale of finance needed for large-scale energy infrastructure projects is beyond the levels which can be provided by development finance alone. This, together with a perception that electricity projects can be self-funding where tariffs are cost-reflective has led to multilateral development banks assuming new roles to facilitate and provide guarantees for large hydropower projects. Increasingly, projects are being financed through public-private-partnership (PPP) arrangements, even in emerging economies, sometimes with support from financiers in a neighbouring country wishing to import electricity generated by the project. However, private financing packages are complex and can take a long time to reach financial closure leading to delays in development. Obtaining private finance for economically viable projects in emerging economies can also be challenging, because private sector investors are often not remunerated by governments for the economic and system benefits of a large hydropower dam. Emerging economies are increasingly turning to so-called ‘coordinated bilateral finance’, from the export credit agencies in BRIC and other economies (such as China Exim Bank). High debt service and the lack of attention to social and environmental protection protocols are among the suggested challenges for emerging economies from this form of finance, but it can be quicker and simpler to arrange than MDB or commercial finance. The talks in this session will examine the risks and benefits associated with all forms of finance, with illustrative examples from sub-Saharan Africa and Southeast Asia.

**Session 2 - Environmental aspects of hydropower and dam development**
- Chair: Dr Stephen Sparkes, Statkraft, Norway
- Assessment of effectiveness of environmental management framework for the Bolshoi hydroelectric project, Sarawak – Deebak Subramani, Law Ing Nguong and Wong Tat King, Sarawak Energy Berhad, Malaysia
- Rural community-based water supply treatment by the Thuen-Hinboun Hydropower Power Company in downstream relocation villages, Laos – Singphet Keothangnin and J. Millgate, Thuen-Hinboun Power Company (THPC), Laos PDR

**Session 3 - Planning tools**
- Chair: Dr Kamal Laksiri, CEB, Sri Lanka
- Quick study of run-of-river potentials with SimPower software – D. Irwanto, Indonesia
- Expanded of the system operations model for the Mahaweli river basin, Sri Lanka – J. Molidinger, B. Freeman and B. Dibrani, Tractebel Engineering GmbH, Germany
- Screening of potential hydropower sites in Philippines using GIS and global data resources – P. Thapa, P. Schafer and S. Poh, Fichtner GmbH & Co. KG, Germany

**Session 4 - Contractual and legal issues**
- (Chair to be confirmed)
- After the hydropower feasibility study: The technical steps to financial close – A. Noble, WSP Australia Pty Limited, Australia
- Legal, contractual and insurance issues for the hydropower development in Nepal – G.P. Kayastha, Chhime Engineering and Services Company, Nepal
- Improving construction time and budget overrun risk management using Monte Carlo simulation – F.P. Megel, M. Wagner and M. Beisler, IFL Consulting Engineers Ltd., Thailand
- Hulu Terengi ana hydroelectric project: The sequencing of Push dam construction and its contractual perspective – M.S. Bin Abu Bakar, Tenaga Nasional Berhad, Malaysia
- Introduction to the guidance for the preparation of tender documents in the emerald book underground works: Managing time risk and cost – M. Smith, Matrics Consult Ltd, Rep of Korea
- Is the FIDIC Emerald Book (Ed. 2019) the best contract for hydropower and dam construction projects? – S. Giraud, EGIS, France

**Session 5 - Social benefits of hydropower and dams**
- Chair: Dr Cecilia Tortajada, Institute of Water Policy at the Lee Kuan Yew School of Water Policy, Singapore
- Keynote: Social-related aspects of hydropower development within a framework of climate change – Dr Cecilia Tortajada, Institute of Water Policy at the Lee Kuan Yew School of Water Policy, Singapore
- Benefit sharing: Enablers, framing mitigation, conflict resolution and development goals – S. Dhillion, Enviro-Div, Norway
- Benefit sharing in hydropower projects of Nepal for economic transformation – G. Khatriwade, NRH Infrastructure & Development Limited, Nepal
- Managing hydropower sustainability risks and opportunities through enhancement of social and environmental impact assessment: A corporate commitment – D.C. Yu Li, J.A.J. Blandei, F.H. Pathi and N.K. Bujang, Sarawak Energy Berhad, Malaysia
- Difficulties in capturing and quantifying the benefits of hydro plants – G. Dos Santos Cruz Rocha, M. Yasuo Kikuchi and M.A. Villarinho Gomes, Workey, Brazil

**Session 6 - River basin management and cascade developments**
- Chair: Prof Bogdan Popa, University Politehnica of Bucharest, Romania
- Operation of run-of-river hydro plants: an example based on XCP and CINR experience respectively on Mekong and Rhone rivers – C. Sampic and S. Panagotparakul Sakokkian, Xayabouri Power Company Ltd, Laos PDR; B. Graff and S. Legrand, CNR, France
- Joint and intelligent regulation of large-scale cascade reservoirs for integrated river basin management – Yen Huang, Qiang Zou, Lu Yi, Shan Yu and Xuemin Wang, Changjiang Institute of Survey, Planning, Design and Research, China
- Challenges of the development of independent hydropower projects as part of a cascade on the Arun river, Nepal – M. Heider and P. Schaffer, Fichtner GmbH & Co. KG, Germany
- Sustainable hydropower development: Case study of Hulu Terengi ana – Shakil Mod Husin, Alyaa Filza Effandi, Mohd Shafiq Zakriyuddin, Ayyun Samaul Bahari, Asahh Md Shukor and Shukor Md Nor, UNINET/MYCOLD, Malaysia
- Hydropower and fish: recurring issues and how to solve them – Taky Cae, Fischk, UK
Wednesday 9 December – Morning

Session 7 - Development opportunities and challenges in Asian countries
Chair: H.L. Aker, Dolsar Engineering, Turkey
- Lao Coordination and Monitoring Center (CMC): Achievement and the next steps – S. Tressat and B. Graf, CNR, France; Chansoung Boonngong and L. Lopha, Ministry of Energy and Mines, Lao PDR
- Opening small hydro power opportunities in emerging markets such as Malaysia with digitalization – Kai En Lam, Matt MacDonald, Malaysia; P. Currie, Matt MacDonald, Singapore
National overviews will then be presented on potential, development opportunities and challenges in a number of Asian countries, including India, Nepal, Myanmar, Laos, Turkey, Iraq and others.

Session 8 - Civil engineering: Design and construction
Co-Chairs: M. Rogers, ICOLD President and Stantec, USA; Prof Xu Zeping, IHW/R/CHINCOLD, China
- Keynote: RCC dam developments over the past 20 years – Dr M.R.H. Dunstan, MD&A, UK
- An overview of RCC dam development in China – Chen Guangfa and Zhen Chunzhou, Power China International Group Ltd, China
- Construction challenges of a high CFRD dam for the Nam Ngum 3 hydro plant – X. Ducas, Q. Barcher, G. Dubry and F. Brousset, Artelia Eau & Environnement, France; K. Phit-Asa, Électricité du Laos, Lao PDR
- Concrete faced rockfill dam (CFRD) construction at the 330 MW Khirangangag hydroelectric project, India – S. Dave and S. Rao, Hindustan Construction Company Ltd, India
- Design aspects of grid diaphragm walls under the circular buttress weir – M.M. Arsalan, Dobar Engineering Co Ltd, Turkey
- Design and construction of large dams on deep alluvial foundations – W. Saboro, RCS Inc, Canada
- The design and construction of a new dam and hydropower plant in Kurdistan, Iraq – H.A. Hawramany, Hydropower Consultant, Iraq
- Application of digital transformation to civil engineering field related to hydropower – M. Kawaguchi, M. Sumida, T. Araki and G. Hibi, Konami Electric Power Company, Japan
- Start-up of the Nam Lik 1 run-of-river scheme, Laos, in a challenging environment – E. Mine and M. Bourcieur de Carabos, Tractebel, France; P. Phumchawsan, GPSC, Thailand
- Repair, rehabilitation and retrofitting of concrete dams with cement based materials – J.R.M. Conde da Silva, National Laboratory for Civil Engineering, Portugal
- Geomembranes in pumped-storage schemes – G. Vassetti and A. Scuero, Carpi Tech, Switzerland; J. Cowland, Carpi Tech, USA
- Lower Kalekoy dam: A tailor made composite dam structure – M. Smesnik, H. Nowotny and M. Verdianz, Afry, Austria; D. Rothweiler and M. Steinl, Pöyry Switzerland Ltd., Switzerland
- Construction of shaft powerhouse for the Nam Theun 1 hydropower project – S. Martin, CK Power Plc, Thailand
- Development and selection principles for Francis turbine runners in China’s sedimentary operating conditions – A. Mehta, PT Voith Hydro Indonesia; S. Reich, Voith Hydro Holding GmbH & Co, Germany
- Challenges of implementing reliable and accurate non-intrusive ultrasonic flow measurement on penstocks at large-scale hydroelectric power plants – D. funk, Flexim GmbH, Germany
- Advances in the design and construction of high head penstocks – G. Ichikawa and K. Karakor, BBA Engineering Ltd, Canada

Session 9 - Achieving optimum performance from ageing assets
Chair: Dr A. Müller, EPEL-LMH, Switzerland
The untapped energy and power of ageing hydropower assets is normally much less costly to develop than new greenfield sites. This IEA Hydro session presents experience on how to identify and develop this potential, as well as modernizing these assets to align less costly to develop than new greenfield sites. This IEA Hydro session presents experience on how to identify and develop this potential, as well as modernizing these assets to align less costly to develop than new greenfield sites. This IEA Hydro session presents experience.

Session 10 - O&M and refurbishment
Chair: D. Paschini, EDF, France
- Contracting out rehabilitation of hydroelectric plant – J.H. Groemer, Hydro-Consul Pty Ltd, Australia
- Major rehabilitation and upgrade of the Toktogul hydro plant in the Kyrgyz Republic: Approach, challenges and benefits – O. Gavreshel and H. Van Buren, Fichtner GmbH & Co. KG, Germany
- Challenges faced in the revival of the Singrauli small hydro plant after flooding – N. Punt and S. Shivastava, NTPC Ltd, India
- Reducing the risk of operational issues due to entrained air using CFD analysis – J. Frener and F.P. Nagel, IEL Consulting Engineers (Asia) Ltd, Thailand
- Study for the rehabilitation of the bottom outlet service and emergency gates for the de-sedimentation tunnel at the Shahid Abbaspour dam and powerplant – M. Ghaderi, Fanavari Noin Niroo Co, Iran
- 66 MW hydropower startup assistance – M. Pötter, Baker Hughes, France; S. Drygin, Baker Hughes, Russia; K. Wenapun, Baker Hughes, Thailand; and Woon Kin Pong, Baker Hughes, Malaysia
- DRIP: 223 dams to be rehabilitated in India - Lessons learnt – S. Giraud, EGIS, France

Wednesday 9 December – Afternoon

Session 11 - Climate change: Research and resilience
Chair: to be confirmed
- Keynote: Water storage for managing extreme hydrological events caused by climate change – Prof Aat K. Biswas, Distinguished Visiting Professor, University of Glasgow, UK, and Chairman, Water Management International Pte Ltd, Singapore
- IEA Communicative to national governments on ‘Climate change: Adaptation, resilience and valuation of hydropower services’ – N. Niemse, IEA-Hydra; A. Harby, SINTEF, Norway; J. Damazio, CEPFL, Brazil
- Future safety of dams in a changing climate – Sairah Mahmoud Siddik, Hidayat Banoz, J. Razali, M. Marufuzzaman and M. Ruzaini Yali, Universiti Tenaga Nasional, Malaysia; A. Abdul Razal, M.R. Mohd Radzi and A. Talib, Tenaga Nasional Berhad, Malaysia
- The importance of hydroelectric power generation in combating climate change in the Malaysian context – C.R. Donnelly, S. Bohn, S. McGinness and J. Greonveld, Hatch Ltd, Canada
- The economics of climate change in the context of hydropower in Asia – S.D. Usher, Aqua-Media International Ltd, UK

Session 12 - Hydropower equipment
Chair: to be confirmed
- Xayaburi hydropower project: Challenges encountered and overcome during the commissioning phase of the first run-of-river hydropower plant on the lower Mekong – A. Schirmann and G. Judmann, Alry, Switzerland; W. Medswang and P. Mahamai, CK Power Plc, Thailand
- Development and selection principles for Francis turbine runners in China’s sedimentary river hydro stations – Pei Zhenwei and Gao Dasayong, China Gezhouba Group International Engineering Co Ltd, China
- Modelling and analysis of hydro-erosive erosion in Francis turbines at different operating conditions – S. Sangal, M.K. Singhal and R.P. Saini, Indian Institute of Technology, India
- Multiple compact units: Detailed analysis – P. Duflon, Andritz Hydro SAS, France
- Voith’s StreamDiver® solution for decentralized low head hydropower plant operation – A. Mehta, PT Voith Hydro Indonesia; S. Reich, Voith Hydro Holding GmbH & Co, Germany
- Challenges of implementing reliable and accurate non-intrusive ultrasonic flow measurement on penstocks at large-scale hydroelectric power plants – D. Funk, Flexim GmbH, Germany
- Advances in the design and construction of high head penstocks – G. Ichikawa and K. Karakor, BBA Engineering Ltd, Canada

Session 13 - Tunnels and underground works
Chair: Dr D. Djarwadi, PT North Sumatera Hydro Energy, Indonesia
- Construction of power waterway for Nam Theun 1 hydropower project – A. Sorgenfrei and P. Hater, Alry, Switzerland; S. Martin, Alry, Thailand
- How CFD enables innovative designs to benefit investors – F.P. Nagel and T. Frener, IEL Consulting Engineers (Asia) Ltd, Thailand; R.H. Nagel and M. Baskovic, Latin Swiss Hydro S.A.C., Peru
- Construction of shaft powerhouse for the Nam Theun 1 hydropower project – S. Martin and P. Bollinger, Pyiwy Energy Ltd., Thailand; C. Krauzer, Pyiwy Austria; D. Rothweiler and M. Steinl, Pyiwy Switzerland Ltd., Switzerland

Session 14 - Cross-border and regional developments
Chair: to be confirmed
This panel discussion will focus particularly on the collaboration between the Mekong riparian countries in South East Asia, and the BBIN countries (Bhutan, Bangladesh, India and Nepal). Participants in the discussions will include Mr Palakorn Chanbanyong, Hydropower Specialist at the Mekong River Commission, Laos; a senior representative of the Lancang-Mekong Water Resources Cooperation Centre, Beijing; Daso Chiewrng Rinzin, Director of Druk Green Power Corp, Bhutan; and, R.Y. Shahi, former Power Secretary, Government of India. (Additional speakers to be confirmed.)
Tuesday 8 December

KL Bird Park, Orchid Gardens and Tamarind Springs Restaurant

Kuala Lumpur Bird Park is a 20.9-acre aviary, located adjacent to the Lake Gardens within the so-called ‘green lung’ of Kuala Lumpur, Bukit Aman. The park houses more than 3000 birds, representing more than 200 species. About 90 per cent are local birds and others were imported from African and Asia-Pacific countries.

After the Bird Park visit, the group will go on to the Orchid Garden, together with the adjoining Hibiscus Garden. There will be a chance to take a walk among exotic tropical blooms in the landscaped gardens. The park has displays of both terrestrial and epiphytic orchids, which are only found in tropical climates.

Lunch will be served surrounded by the natural beauty of the jungle, at the famous Tamarind Springs restaurant, located on the fringe of the City, within the Ampang natural forest reserve. Tamarind Springs offers fine contemporary Indochinese cuisine and features elegant décor, based on traditional Malay houses, infused with elegant and rustic Asian furnishings. With its wooden decks and tropical vegetation, it gives the feel of being far from the city centre.

Wednesday 9 December

Batu Caves, Orang Asli Museum and Istana Negara

The Batu Caves, on the outskirts of Kuala Lumpur, are within a limestone hill dating back 400 million years, and feature a series of caves and cave temples, reached via 272 colourfully painted steps. The religious site has the world’s tallest statue of the Hindu deity Murugan and is one of the most important Hindu shrines outside India. After the Batu Caves visit, the group will visit the Orang Asli Museum to learn about the culture and traditions of the local Orang Asli tribe in Selangor. After lunch the group will have a chance to see the National Palace (home of the supreme head of state, Yang di-Pertuan Agong), and its magnificent gardens, protected by mounted horseguards. It is a splendid example of Malay and Islamic architecture.

Thursday 10 December

Cooking and Selangor pewter

The final excursion offers the opportunity for the group to enjoy the tastes of Malaysian cooking, learning about traditional Malaysian ingredients and cooking techniques, while preparing a selection of dishes, which will be enjoyed by the group for lunch.

After lunch, guests will take a trip to the ‘School of Hard Knocks’ where they will practice the craftsmanship of creating their own pewter dish, using the traditional tools of hammer, mallet and wooden mould.

After creating a personal pewter dish souvenir, guests will tour the Pewter Factory, where the world famous brand of pewter is produced. The Pewter Museum is a fascinating visit.
STUDY TOUR A

Sungai Perak
3 days, 2 nights (+ third night in KL)
The group will travel by luxury coach to the west of the country, stopping for lunch in Kuala Kangsar before continuing on to the Belum Rainforest Resort, which is one of Malaysia’s leading ecotourism resorts. The jungle surrounding the accommodation remains as it has been for centuries. This will be the base for the group for two nights. After check-in, the group will have a sunset cruise on Temenggor reservoir, before heading back for dinner.

Next day, the first technical visit will be to the third largest dam in Malaysia, Temenggor, originally built for hydropower, but now also a major fish breeding site. After a technical briefing and tour of the main features, the group will move on to visit Chenderah, the oldest dam and hydro plant in the country, built in 1920 for the Lower Perak, and considered the largest industrial undertaking on Peninsular Malaysia at the time. The main dam is at el. 50 m. The powerplant has an installed capacity of 40.5 MW, from five units. Finally, the group will visit Kenering dam, which has a 120 MW powerplant. Packed lunches will be provided on this day. The day will end with dinner and relaxation back at the Belum Rainforest Resort.

On the morning of the third day, the group will spend a couple of hours in the morning exploring Royal Belum park, visiting the 60 salt licks around the area as well as having an opportunity to see the rare rafflesia flower. An early lunch will be served at the resort before the group checks out and returns by coach to Kuala Lumpur.

Back in Kuala Lumpur guests will check back into the Shangri-La and re-join the Tour B group for a farewell dinner. The tour will end after breakfast next morning.

STUDY TOUR B

Kenyir and Terengganu
3 days, 2 nights (+ third night in KL)
The group will travel by luxury coach to the northeast of the country to Kuala Terengganu, stopping for lunch along the way before arriving at the Kenyir dam, for a briefing and site visit. The dam is 150 m high above its foundation, and has a crest length of 800 m; the fill volume is 15.20 x 10^6 m^3. After the visit, guests will check into the 4-star Primula beach resort in the heart of Kuala Terengganu, overlooking the East Coast. This will be the group’s base for two nights.

On the second day, the next technical visit will be to the Puah dam, an earthfill structure which is a key element of the Hulu Terengganu hydroelectric complex. Puah dam was completed and handed over to the owner (Tenaga Nasional Berhad) in December 2015. The associated powerplant houses two 125 MW generating units. After a briefing and a tour of the dam and powerplant, the group will travel on to Pengkalan Gawi for lunch, before taking a relaxing boat trip on Kenyir Lake.

The third day will allow participants to enjoy the local culture, starting with a visit to the Kuala Terengganu drawbridge; this is the first drawbridge to be built in Malaysia and Southeast Asia, and was constructed by Zelan Construction Sdn Bhd. The construction of the bridge began in August 2014 and was completed in mid-2019. After this visit, the group will visit the Kenyir Elephant Sanctuary which was built in 2012 on a 256 ha site, of which 90 per cent has been left in its natural forest state, to provide a home for the elephant orphans who live there. Lunch will be served at a local restaurant and then the group will depart to the airport for the flight back to Kuala Lumpur. Guests will check into the Shangri-La hotel and in the evening there will be a farewell dinner together with Tour A participants.
A major technical exhibition will run alongside the ASIA 2020 conference (30 June to 2 July), showcasing the latest developments in the water and renewable energy sectors, as well as the activities of professional associations, and the services of specialist consultants, contractors and equipment suppliers. All lunch and refreshment breaks will take place in the spacious exhibition halls, and there will be a networking party after the conference sessions on 9 December to provide an additional opportunity for meetings between exhibitors and international delegates. Exhibition stands are available in units of 6 m², and custom-built units can be arranged. Some favourable positions still remain; if you would like to book a place, we recommend that you contact the sales team as soon as possible (see details below).

Exhibition stands are available in units of 6 m², and custom-built units can be arranged. Some favourable positions still remain; if you would like to book a place, we recommend that you contact the sales team as soon as possible (see details below).

Single stands available: 3 x 2 m (6 m²) = US$ 3550

A number of sponsorship opportunities are available, such as conference bags, water coolers, coffee and lunch breaks, WiFi, and various social events. Full details can be obtained from our Sales & Marketing team, and are also available on our website.

Meanwhile, for further information or to reserve an exhibition stand, contact:

Dr Lukas Port, Mrs Maria Loredo or Mrs Melanie Ganz • Tel: + 44 20 8773 7250/7251/7252 • Email: sales@hydropower-dams.com

www.hydropower-dams.com/asia-2020/exhibition-plan
<table>
<thead>
<tr>
<th>Company Name</th>
<th>Website</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRY, Thailand</td>
<td><a href="http://www.afry.com">www.afry.com</a></td>
<td>13</td>
</tr>
<tr>
<td>Andritz Hydro, Austria</td>
<td><a href="http://www.andritz.com/">www.andritz.com/</a> hydro</td>
<td>23</td>
</tr>
<tr>
<td>Armaturey Group a.s., Czech Republic</td>
<td><a href="http://www.armatureygroup.com">www.armatureygroup.com</a></td>
<td>67</td>
</tr>
<tr>
<td>Artelia, France</td>
<td><a href="http://www.arteliagroup.com">www.arteliagroup.com</a></td>
<td>6</td>
</tr>
<tr>
<td>ATB Riva Calzoni, Italy</td>
<td><a href="http://www.atbr.com">www.atbr.com</a></td>
<td>74</td>
</tr>
<tr>
<td>Bently Nevada, a Baker Hughes business, Malaysia</td>
<td><a href="http://www.bently.com">www.bently.com</a></td>
<td>66</td>
</tr>
<tr>
<td>Bosch Rexroth B.V., Netherlands</td>
<td><a href="http://www.boschrexroth.com">www.boschrexroth.com</a></td>
<td>52</td>
</tr>
<tr>
<td>Carpi, Switzerland</td>
<td><a href="http://www.carpitech.com">www.carpitech.com</a></td>
<td>61</td>
</tr>
<tr>
<td>Cementys, France</td>
<td><a href="http://www.cementys.com">www.cementys.com</a></td>
<td>49</td>
</tr>
<tr>
<td>CKD Blansko, Czech Republic</td>
<td><a href="http://www.ckdblansko.cz">www.ckdblansko.cz</a></td>
<td>53</td>
</tr>
<tr>
<td>Dolsar Engineering Inc Co, Turkey</td>
<td><a href="http://www.dolsar.com.tr">www.dolsar.com.tr</a></td>
<td>42</td>
</tr>
<tr>
<td>Dynavec, Norway</td>
<td><a href="http://www.dynavec.no">www.dynavec.no</a></td>
<td>28</td>
</tr>
<tr>
<td>Enerquip, Norway</td>
<td><a href="http://www.enerquip.no">www.enerquip.no</a></td>
<td>28</td>
</tr>
<tr>
<td>E. Nencini</td>
<td><a href="http://www.nencini.com">www.nencini.com</a></td>
<td>47</td>
</tr>
<tr>
<td>Feroinvest DDO, North Macedonia</td>
<td><a href="http://www.feroinvest.mk">www.feroinvest.mk</a></td>
<td>14</td>
</tr>
<tr>
<td>Fichtner GmbH &amp; Co.KG, Malaysia</td>
<td><a href="http://www.fichtner.de">www.fichtner.de</a></td>
<td>73</td>
</tr>
<tr>
<td>Gamesa Electric, Spain</td>
<td><a href="http://www.gamesaelectric.com">www.gamesaelectric.com</a></td>
<td>12</td>
</tr>
<tr>
<td>Gilkes, UK</td>
<td><a href="http://www.gilkes.com">www.gilkes.com</a></td>
<td>43</td>
</tr>
<tr>
<td>Glenfield Asia Pacific, Australia</td>
<td><a href="http://www.glenfieldap.com.au">www.glenfieldap.com.au</a></td>
<td>57</td>
</tr>
<tr>
<td>Gugler Water Turbines GmbH, Austria</td>
<td><a href="http://www.gugler.com">www.gugler.com</a></td>
<td>8</td>
</tr>
<tr>
<td>Hibbard Inshore, LLC, USA</td>
<td><a href="http://www.hibbardinshore.com">www.hibbardinshore.com</a></td>
<td>90</td>
</tr>
<tr>
<td>ICH, Norway</td>
<td><a href="http://www.ich.no">www.ich.no</a></td>
<td>28</td>
</tr>
<tr>
<td>ICOLD</td>
<td><a href="http://www.icold-cigb.org">www.icold-cigb.org</a></td>
<td>51</td>
</tr>
<tr>
<td>ILF Consulting Engineers (Asia) Ltd., Thailand</td>
<td><a href="http://www.ilf.com">www.ilf.com</a></td>
<td>3</td>
</tr>
<tr>
<td>Indar, Spain</td>
<td><a href="http://www.indar.net">www.indar.net</a></td>
<td>17</td>
</tr>
<tr>
<td>Industrial Processors &amp; Metallizers (P) Ltd., India</td>
<td><a href="http://www.ipmpl.co.in">www.ipmpl.co.in</a></td>
<td>50</td>
</tr>
<tr>
<td>Kansai Electric Power Company</td>
<td><a href="http://www.kepco.co.jp/english">www.kepco.co.jp/english</a></td>
<td>1</td>
</tr>
<tr>
<td>KGAL Consulting Engineers Ltd, UK</td>
<td><a href="http://www.kgalglobal.com">www.kgalglobal.com</a></td>
<td>19</td>
</tr>
<tr>
<td>Mapei, Malaysia</td>
<td><a href="http://www.mapei.com">www.mapei.com</a></td>
<td>87</td>
</tr>
<tr>
<td>Mavel a.s, Czech Republic</td>
<td><a href="http://www.mavel.cz">www.mavel.cz</a></td>
<td>60</td>
</tr>
<tr>
<td>Montanhydraulik GmbH, Germany</td>
<td><a href="http://www.montanhydraulik.com">www.montanhydraulik.com</a></td>
<td>15</td>
</tr>
<tr>
<td>Mott MacDonald, Singapore</td>
<td><a href="http://www.mottmac.com">www.mottmac.com</a></td>
<td>77</td>
</tr>
<tr>
<td>Muhr, Germany</td>
<td><a href="http://www.muhr.com">www.muhr.com</a></td>
<td>65</td>
</tr>
<tr>
<td>Multiconsult, Norway</td>
<td><a href="http://www.multiconsult.no">www.multiconsult.no</a></td>
<td>28</td>
</tr>
<tr>
<td>Norconsult, Norway</td>
<td><a href="http://www.norconsult.no">www.norconsult.no</a></td>
<td>28</td>
</tr>
<tr>
<td>Norwegian Pavilion</td>
<td><a href="http://www.norwep.com">www.norwep.com</a></td>
<td>28</td>
</tr>
<tr>
<td>Quest Integrity NZL Ltd, New Zealand</td>
<td><a href="http://www.questintegrity.com">www.questintegrity.com</a></td>
<td>76</td>
</tr>
<tr>
<td>Rainpower, Norway</td>
<td><a href="http://www.rainpower.eu">www.rainpower.eu</a></td>
<td>28</td>
</tr>
<tr>
<td>Rittmeyer AG, Switzerland</td>
<td><a href="http://www.rittmeyer.com">www.rittmeyer.com</a></td>
<td>69</td>
</tr>
<tr>
<td>SMEC (M) Sdn Bhd, Malaysia</td>
<td><a href="http://www.sme.com">www.sme.com</a></td>
<td>45</td>
</tr>
<tr>
<td>Soletanche Bachy / Freyssinet, France</td>
<td><a href="http://www.soletanche-bachy.com">www.soletanche-bachy.com</a></td>
<td>93</td>
</tr>
<tr>
<td>Stahlhandel Gröditz GmbH, Germany</td>
<td><a href="http://www.stahlportal.com">www.stahlportal.com</a></td>
<td>7</td>
</tr>
<tr>
<td>STM Srl - Sviluppo Tecnologie Meccaniche, Italy</td>
<td><a href="http://www.stmportunzenzi.com">www.stmportunzenzi.com</a></td>
<td>44</td>
</tr>
<tr>
<td>The International Journal on Hydropower &amp; Dams</td>
<td><a href="http://www.hydropower-dams.com">www.hydropower-dams.com</a></td>
<td>71</td>
</tr>
<tr>
<td>Thordon Bearings Inc, Canada</td>
<td><a href="http://www.ThordonBearings.com">www.ThordonBearings.com</a></td>
<td>10</td>
</tr>
<tr>
<td>Tractebel Engie</td>
<td><a href="http://www.tractebel-engie.com">www.tractebel-engie.com</a></td>
<td>48</td>
</tr>
<tr>
<td>Trevi Construction Co Ltd, China</td>
<td><a href="http://www.trevispa.com/en">www.trevispa.com/en</a></td>
<td>55</td>
</tr>
<tr>
<td>Troyer SpA, Italy</td>
<td><a href="http://www.troyer.it">www.troyer.it</a></td>
<td>5</td>
</tr>
<tr>
<td>Voith, Germany</td>
<td><a href="http://www.voith.com">www.voith.com</a></td>
<td>33</td>
</tr>
<tr>
<td>VortexHydra srl, Italy</td>
<td><a href="http://www.vortexhydradams.com">www.vortexhydradams.com</a></td>
<td>31</td>
</tr>
<tr>
<td>Whesooe Sdn Bhd, Malaysia</td>
<td><a href="http://www.whesooe.com.my">www.whesooe.com.my</a></td>
<td>19</td>
</tr>
<tr>
<td>Worthington Products, USA</td>
<td><a href="http://www.tuffboom.com">www.tuffboom.com</a></td>
<td>63</td>
</tr>
<tr>
<td>WWS Wasserkraft GmbH, Austria</td>
<td><a href="http://www.wws-wasserkraft.at">www.wws-wasserkraft.at</a></td>
<td>41</td>
</tr>
<tr>
<td>Xylem - Sea and Land Technologies, Malaysia</td>
<td><a href="http://www.sea-landtech.com">www.sea-landtech.com</a></td>
<td>9</td>
</tr>
<tr>
<td>Zeco Hydropower, Italy</td>
<td><a href="http://www.zeco.it">www.zeco.it</a></td>
<td>18</td>
</tr>
</tbody>
</table>

**Industry sponsors:**

![Andritz](image1.png)  
![Voith](image2.png)  
![Muhr](image3.png)