

Empowering the next generation

IWP&DC asked members of the industry to share their views on the importance of encouraging young professionals within the sector

International Association for Hydro-Environment Engineering and Research (IAHR) Young Professionals Network

The IAHR Young Professionals Network was formed to help young professionals build and nurture their career, targeting those under 35 years old in the early stage of their working life. Joining the IAHR Young Professional Network (YPN) means becoming part of a network of around 2500 young professionals from all over the world, with more than 56 YPNs in 31 different countries. Its aim is to ensure that new generations of future hydro-environment professionals and researchers have the opportunity to engage in IAHR activities, network and connect with peers and senior IAHR members, receive mentoring and support, and get access to the latest knowledge, information and know-how in the early stage of their careers. Other opportunities include active participation in IAHR technical committees,

working groups and projects, helping to address the world's most pressing water challenges. There are also free and/or discounted subscriptions to journals, books, proceedings and access to the IAHR e-library, plus the chance to take part in IAHR events and attend webinars specially designed for young professionals (addressing how to write a good paper, how to best approach paper writing, etc.) IAHR YPNs also include a series of successful initiatives such as the annual IAHR Young Professionals Congress, the Professionals Challenge, a webinar series and the IAHR Water Jobs Offers. There is also an extensive list of awards tailored to young professionals such as the John F. Kennedy Student Paper Competition Award, the IAHR Gerhard Jirka Award for Young Researchers, and the Stephen

E. Coleman Best Paper Award for Young Researchers. IAHR believes that YPN members represent the backbone of the future IAHR and play an important role within the association through their activities and initiatives. It is an active and ever-growing network, with the creation of a new YPN in India called "IAHR Southern-India Young Professional Network (IAHR SI YPN)" standing as testament to this. IAHR says that Young Professionals will be part of a thought-leading global community working together for a better and sustainable water future for all, and join a new generation of future hydro-environment professionals and researchers to make a real difference. ● **For more details contact Sally Feng at membership@iahr.org**

New Zealand Society on Large Dams (NZSOLD) Shreesh Basnyat, Young Professionals Group Co-Chair

The NZSOLD Young Professionals Group was formed in 2015 and those under 40 years of age in the New Zealand dams industry can join. It currently has around 420 members and organises learning, development and networking events, and participates in organisations management committee meetings to represent Young Professionals. The aim of the group is to support learning, development and networking opportunities for Young Professionals in New Zealand's dams

industry. Transfer of knowledge is promoted through sharing of experience and knowledge via webinars, conferences and symposiums. This year our annual field trip visited a hydro scheme in Tauranga and the tailings dam at a gold mine. As well as holding photo and poster competitions, organising symposiums and networking events, we recently held a webinar to share experience of dam construction by Young Professionals in New Zealand. I believe that the role of such groups

will grow in importance and evolve in the future, especially with the gap between the experienced professionals in the dam industry and young professionals. The demand will be there to grow and develop the next generation. Other ways to support young professionals would be direct mentoring, providing scholarships and the presence of the dams industry in open days at universities to encourage interest of students. NZSOLD is currently doing some of these but there are opportunities to improve. ● **For more details see <https://nzsold.org.nz/committee/young-professionals-group/>**



Right: **Shreesh Basnyat, Young Professionals Group Co-Chair, NZSOLD**



Above: NZSOLD's Young Professionals group recently took part in a field trip to a tailings dam

Australian National Committee on large Dams (ANCOLD) Brandon Pearce, National Young Professionals Convenor

The Australian National Committee of Large Dams (ANCOLD) has a vision of advancing excellence in dam technical practice and the management of dams in Australia. ANCOLD disseminates knowledge, provides guidance in achieving excellence for technical dam practice and management, and supports industry members to develop capability. A significant contributor to the success of ANCOLD's mission is the ANCOLD Young Professionals (YP) group which was established in 2010 in response to strong industry movement that the development of young professionals and keeping them in the dam industry is of high priority. Since 2010 the industry presence of the ANCOLD YP group has grown as it aims to provide learning and networking opportunities to professionals from 92 member organisations. As the current Australian National YP Convenor, I am privileged to lead a team of nine motivated and innovative YP state representatives who are empowered to lead their own state-based local organising committees. In the past 12 months the team has achieved many significant milestone firsts including initiating an ANCOLD industry mentoring programme, releasing a 'Life of a Dam' technical learning webinar series, and presenting our YP strategic plan to member organisations at our 2023 ANCOLD national conference. Our YP group provides first-hand dam exposure to members via regularly organising site visits to member organisation assets. The team also facilitates and hosts industry leading technical expert discussion panels to encourage further industry learning. Through YP member initiatives we strive to support ANCOLD's strategy to continuously improve our industry's competency and encourage knowledge transfer from industry experts to developing professionals. By providing various platform opportunities for knowledge exposure and expert networking we are positively encouraging and assisting with the development of future ANCOLD leaders.



Above: **Brandon Pearce (ANCOLD National YP Convenor) and Erin Hughes (Queensland YP State Rep) presenting the ANCOLD YP Strategic Plan at the ANCOLD 2023 National Conference**

Although ANCOLD YP initiatives are designed to target members of 35 years of age or younger, it is recognised that all members should have the opportunity to participate in learning initiatives, and as such all members are invited to participate where possible. Our ANCOLD YP group also facilitates state-based social networking opportunities to encourage YPs of various industry organisations to build their professional social circles and learn from one another's industry experiences. These meetings of asset owners, consultants, contractors, researchers and regulators encourage a broader YP awareness of our industry and provides opportunity for YPs to reflect on the various impacts of their industry involvement. We are also very keen to present dams engineering as an attractive option to graduates exploring which industry to launch their career, as so many of the current YPs are really

energised by the opportunities in the dams sector. In October 2024 I am privileged to be representing ANCOLD YPs at ICOLD24 in New Delhi, India. I am excited to share our Australian YP strategies and successes on a global stage and feel Australia is well positioned to positively influence the future of YP development internationally. In an ever-changing Australian and international dams climate it is critical that the dams industry continues to invest in the future of its professionals via learning and development initiatives. YP engagement in ANCOLD initiatives has continued to grow substantially, with the YP leadership team hosting sellout events and an increasing number of member organisations approaching ANCOLD with further YP industry learning and development opportunities. While the industry continues to change through long term climate predictions, sustainable renewable energy opportunities and the renewal and repurposing of assets, it is critical that there is a constant investment in industry education, knowledge transfer and mentoring to ensure the dam industry remains at the forefront of best practice and expert innovation for generations to come. ●



Above: **ANCOLD YP Leadership Team at ANCOLD 2023 National Conference, Left to Right, Jake Gallup (Australian Capital Territory), Sam Lalli (Victoria), Josh Clark (Tasmania), Erin Hughes (Queensland), Brandon Pearce (Aus National Convenor), Joel Eadie (Queensland), Yuqi Tan (Northern Territory), Ryan Misola (New South Wales)**



Left: **Author: Brandon Pearce (ANCOLD National Young Professionals Convenor)**

International Hydropower Association
Victoria Cardenas, Senior Communications Manager, IHA

The International Hydropower Association (IHA) is committed to youth engagement in the hydropower sector. As the global energy landscape continues to evolve, the importance of engaging the next generation of professionals in sustainable energy practices cannot be overstated. IHA recognises that the future of the hydropower industry rests on the shoulders of today's youth. Their fresh perspectives, innovative ideas, and commitment to sustainability are crucial in driving the sector forward.

The need for youth involvement in the hydropower sector is underscored by several key findings. The International Labour Organisation's (ILO) 2022 Global Employment Trends for Youth report highlights that the current workforce in the clean energy sector tends to be older. As these workers approach retirement, there is an urgent need to prepare the next generation to fill these roles. However, this transition will only be successful if young people are equipped with the necessary skills and knowledge.

Hydropower alone created 2.5 million direct jobs in 2022, with operations and maintenance accounting for nearly two-thirds of these positions. Yet, the sector faces a looming professional gap due to the retirement of a significant segment of its workforce within the next decade. The insufficient pipeline of young talent to replace these retiring professionals presents a critical challenge that must be addressed.

IHA is actively working to ensure that youth representation is a cornerstone of its activities. At the 2023 World Hydropower Congress, for instance, multiple sessions featured panellists under the age of 30, and some sessions were even led by youth, reflecting IHA's commitment to engaging diverse voices. Similarly, during Hydropower Africa Week in Abuja, Nigeria, a session led by Student Energy highlighted the employment challenges faced by youth in



Above: **Eddie Rich, CEO of the IHA, and Helen Watts, Executive Director of Student Energy, celebrate the partnership between the two organisations at COP28**

Nigeria and explored strategies to bridge the gap for young people entering the workforce.

To further understand the workforce challenges faced by the hydropower sector, IHA has also launched a survey in collaboration with students from the ESCP Business School. This initiative aims to shed light on the current and potential challenges the industry may face, particularly due to the impending retirement of a significant segment of the workforce and the need to ensure a robust pipeline of young talent to replace them.

At COP28, IHA entered a strategic partnership with Student Energy, a global organisation dedicated to empowering young leaders in the energy transition. This partnership is designed to connect young people to the global hydropower industry, fostering a knowledge

exchange that benefits both the youth and the industry at large.

The partnership between IHA and Student Energy is a dynamic exchange where both parties contribute and benefit. Through this collaboration, young members of Student Energy will have the opportunity to engage with IHA's global network of hydropower professionals, gaining insights into the industry, accessing career development opportunities, and participating in mentorship programs. This will empower them with a deeper understanding of sustainable hydropower development and the critical role it plays in the global energy transition.

In return, Student Energy will connect IHA members to a global network of diverse youth perspectives, data, and evidence on youth engagement in the clean energy sector. This will allow us to better understand the needs and aspirations of the next generation and identify ways to support their integration into the sustainable hydropower community. This integration of youthful insights is essential for ensuring that the hydropower industry remains relevant and innovative as it adapts to future challenges.

The hydropower industry is committed to continuing its efforts to integrate youth into the hydropower sector. Ensuring youth representation at all events, fostering partnerships like the one with Student Energy, and addressing workforce challenges are all part of this ongoing mission. As the hydropower industry evolves, the passionate minds and innovative spirits of today's youth will be essential in steering the sector towards a sustainable and prosperous future. ●



Above: **Rebecca Ellis, IHA's Energy Policy Manager, on a panel at the 2023 World Hydropower Congress**

Swiss Committee on Dams
Carolin Friz, Student President, Young Professionals of Swiss Dams

The Young Professionals section of the Swiss Committee on Dams was formed in March 2019. It is open to those under the age of 35 and currently has about 60 members - 25% of the entire Swiss Committee on Dams.

As with other national committees of ICOLD, the YP group's objectives are to encourage the participation and involvement of young professionals and promote the transfer of knowledge to the younger generation.

Some of its notable successes include former YP members now heading national committee working groups, while YPs were among winners of the Swiss Dams annual award for outstanding Master theses related to dams. It has also been building bridges between languages within Switzerland, promoting the exchange between different parts of Switzerland and with other YP groups, such as Germany and Austria.

As the industry changes and faces new challenges, YP groups will become even more important over time as young professionals will bring fresh ideas and new approaches that are crucial for progress. These groups help bridge the gap between experienced and newer members, and their role in promoting innovation and adapting to new technologies will keep growing.



Above: **12th ICOLD European Club Symposium Interlaken, Sep. 2023**



Above: **Carolin Friz, Student President Young Professionals Swiss Dams**

Supporting young professionals now will pay off in the future as they drive future advancements and address upcoming challenges in the field. This is of particular relevance in Switzerland, where the Swiss recently accepted the new electricity law to secure electricity supply from renewable energy sources.

Hydropower is the main energy source in Switzerland, contributing about 58% to total production with plans to increase. Considering that most dams were constructed in the 1950s and 70s, a great deal of experience among dam engineers has been developed that now

needs to be transferred to younger generations. Indeed, in order to maintain and rehabilitate existing hydro facilities, a great level of expertise is needed for tomorrow's engineers, and this is where young professional groups help to ensure that knowledge transfer.

There are various ways that young professionals can be supported in the industry. For example:

- Companies should encourage young professionals to participate in young professional groups (of different kinds).
- Companies should be willing to invest/fund YPs participation in events, such as excursions, seminar series, technical days, workshops.
- Companies should think of giving more days for further education for young professionals that also keeps young people staying within the company and contributing.
- Knowledge transfer is big issue and needs to be encouraged with workshops (inside a company). ●



Left and above: **Excursion to the Linth Limmern pumped storage hydropower scheme; inside the galleries, Dec. 2023**



Above: **Young Professionals meeting in Locarno, June 2024**



Above and right: **Excursion to Spittallamm construction site and new low level outlet, Aug. 2024**



Above: **Young Professionals gathering, Bern, 2024**

