



91st ICOLD Annual Meeting

11–15 June, 2023

The Swedish Exhibition Centre,
Gothenburg, Sweden



FINAL BULLETIN

WELCOME TO GOTHENBURG, SWEDEN 11–15 June 2023

Invitation from the Organising Committee:

Dear colleagues, the Swedish National Committee of ICOLD, SwedCOLD, is happy to invite you to participate in the 91st ICOLD Annual Meeting that we will hold in Gothenburg in June 2023.

The relationship between ICOLD and the Swedish hydro power and mining industries has always been important to us, and has provided a good international base for our work. In Sweden this is of special importance as the hydro power industry provides close to 50 % of all electricity in the country, and the mining industry is considered to be strategically important and the prerequisite for many of the other industrial activities in the country. This means we are depending on a good engineering practice to build and maintain our dams. We would like to share our knowledge on these practices as well as to receive the experiences and knowledge of the ICOLD international community.

Sweden in June will be at its best. The Swedish summer will give you lush green bright nights, blue sea and harsh grey rock in the archipelago. We are sure you will be enjoying our Swedish hospitality with an exciting, technical program, interesting tours, nice social activities and a pleasant program for our accompanying persons.

For the Organising Committee

*Anders Isander
Chairman*

ORGANISING COMMITTEE

Anders Isander (Chair) - Uniper

Maria Bartsch (President SwedCOLD) - Svenska kraftnät, Communications and Liaison

Per Elvnejd (vice President SwedCOLD) - Swedenergy, Communications and Tours

Erik Nordström - Vattenfall, Technical Program

Sara Töyrä - LKAB, Tours and Technical Program

Lisa Broberg - Sweco, Tours

Öyvinn Lier - Norconsult, Finance, Sponsorship and Exhibition

Gabriella Molinder - Sweco, YEF

Finn Midböe - Rejlers, Tours

Anna Sundström - Meetx, Conference organiser, Social and Accompanying Persons Program

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Please visit our website for up-to-date information including registration, sponsorship and exhibition hall.

www.icold-cigb2023.se

A MESSAGE OF INVITATION FOR ICOLD 2023 FROM PRESIDENT MICHEL LINO

Dear colleagues and friends of ICOLD,

On behalf of the International Commission of Large Dams/Commission Internationale des Grands Barrages (ICOLD/CIGB), I am pleased to invite our 104 National Committees to send delegates and their accompanying persons to 91st Annual Meeting of ICOLD. The meeting will be held 11 – 15 June 2023, in Gothenburg, Sweden.

Gothenburg is a friendly city located on the west coast of Sweden. She is called the second Swedish capital and known for its culture and long history of international trade and influences. As the second-largest city in Sweden, Gothenburg boasts a vibrant cultural scene, world-class restaurants, sustainable living, and a fascinating history – all within walking distance from our ICOLD hotels and conference centre. In June we should enjoy very pleasant weather conditions.

This 91st Annual Meeting of ICOLD will be hosted by the National Committee of Sweden, SwedCOLD, who have been preparing for several years now. Several excellent Study Tours will be offered before and after the meeting along with our usual ICOLD exclusive Cultural Evening and Technical Excursion. SwedCOLD is also hosting a special symposium as part of ICOLD 2023 themed Management for Safe Dams. The purpose of this symposium is to share information from case studies, technologies, and innovations to increase the safety of dams and levees along with their associated benefits, perfectly fitting with the essential commitment of ICOLD to Dam Safety.

I am convinced that the ICOLD 2023 Organising Committee, led by Maria Bartsch, President of SwedCOLD and former Vice-President of ICOLD, and Anders Isander, Chairman of the Organising Committee will arrange a wonderful event and a friendly and inclusive reunion of the ICOLD family.

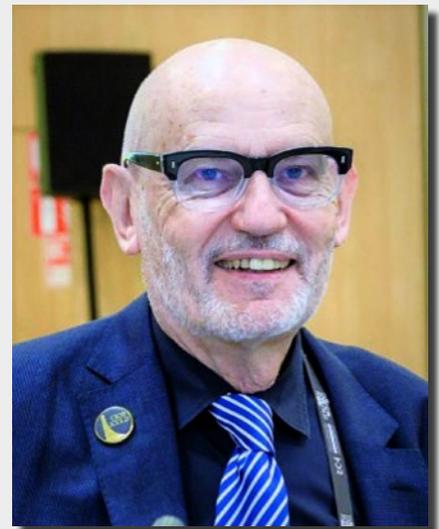
The year 2022 saw dramatic droughts across the northern hemisphere, devastating floods in South Africa and Pakistan, and a global energy

crisis compounded by the war in Ukraine. In our changing world, ICOLD must be a key player in offering solutions to climate change adaptation and energy transition. We, dam and reservoir professionals, must pledge to play our full part in the process. Our annual meetings and congresses are milestones in our efforts to achieve these goals.

So, I warmly encourage our ICOLD family and friends to gather for ICOLD 2023 in Gothenburg as we continue the work to meet our mission in setting standards and guidelines to ensure that dams and levees are built and operated safely, efficiently, economically, and are environmentally sustainable and socially equitable. I invite representatives from all 104 ICOLD National Committees to participate in this meeting as we endeavour to meet the challenges of the 21st century in the development and management of the world's water and hydro power resources and to be part of the solution to the crisis that the planet is going through.

I will be glad to welcome you in Gothenburg in June 2023 in person and in good health.

Yours sincerely,



Michel Lino
President of ICOLD

WELCOME FROM SWEDCOLD

Dear colleagues, it is an honour for the Swedish National Committee of ICOLD, SwedCOLD, to invite you to attend the 91st ICOLD Annual Meeting in Gothenburg, June 2023. Since the foundation of ICOLD SwedCOLD has successfully hosted three ICOLD events; the first Congress in 1933, the third Congress in 1948 and the Annual Meeting in 1981. The relationship between ICOLD and the Swedish hydro power and mining industries has always been important to us, and has provided a good international base for our work. In Sweden this is of special importance as the hydro power provides close to 50 % of all electricity in the country, and the mining industry is considered to be strategically important and the prerequisite for many of the other industrial activities in the country.

In Sweden there are an estimated 10,000 dams of varying size and age.

SwedCOLD

Dam constructions for various purposes have been of great importance for the development of the country in the past centuries. The use of dams for regulation and use of the power of the water started during the Middle Ages, in mills for grinding grain, sawing timber and in draining mines and hoisting up ore. During the 17th and 18th centuries, dams played a major role in the development of iron production.

During the 19th century, dam constructions were an important part of the transformation to the industrial society. The development of dam and hydraulic engineering made it possible to utilize the water, partly as a power source for the industry and partly for the transport of raw materials and finished products on watercourses and through channels and locks. Various forms of levees have also been used to gain land and are still constructed to provide flood protection.

During the 20th century, the expansion of hydro power for electricity production was one of the cornerstones of wealth development. For this development knowledge and experience of construction, technology has been crucial. The first large hydro power dams in Sweden were built in the early 1900s, and the development peaked in the 1950s and 1960s. Today there are about 200 large dams; most

of these are hydroelectric dams while some are tailings dams. Whereas very few large hydro power dams have been built after the 1980s, construction of large tailings dams is still ongoing.

It would be a pleasure to welcome all delegates to the city of Gothenburg, and to technical tours visiting various hydro power and tailings dam projects in Sweden as well as the rich nature, cultural and tourist attractions.

SwedCOLD has been a member in ICOLD since 1931. The National Committee is Organised as an Executive Committee with representatives from dam owners in the hydro power and mining industry, consultants, contractors, industry Organisations and the national dam safety regulator. A large network of professionals working in the field of dams are connected to SwedCOLD, in addition there is a network for young engineers.

SwedCOLDs main objectives are to provide a national forum for information and discussion of important matters in the field of dams, to contribute to knowledge transfer and development within the field of dam engineering and to the work of ICOLD through participation in technical committees, annual meetings and congresses. Twice a year SwedCOLD Organises a well attended symposium devoted to selected topics in the field of dams. SwedCOLD also publishes a newsletter, host workshops and arrange site visits to dam projects.



Maria Bartsch
President SwedCOLD



Anders Isander
Past President SwedCOLD, Lead Local Org. Com.



ORGANISING COMMITTEE



SCIENTIFIC COMMITTEE

Erik Nordström, Vattenfall R&D (Chairman)

Annika Bjelkevik, Tailings Consultants
Scandinavia

Fredrik Johansson, KTH Royal Institute of
Technology

Sam Johansson, Hydro research

Anders Marklund, Vattenfall

Carl-Oscar Nilsson, Uniper

Sara Töyrä, LKAB

Marie Westberg Wilde, AFRY

James Yang, Vattenfall R&D

ICOLD BOARD OF DIRECTORS



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ICOLD INFORMATION

The International Commission on Large Dams (ICOLD) was founded in 1928, the central office is located in Paris, to provide a forum for discussion and for the exchange of knowledge and experience in dam engineering for engineers and others concerned with the development of water resources. Its objectives are to encourage improvements in dam engineering in all its aspects, and in all phases of the planning, design, construction and operation of dams and associated works. With a present total of 104 member countries,

ICOLD leads the profession in ensuring that dams are built and operated safely, efficiently, economically, and with a minimum environmental impact. For 40 years, ICOLD has been particularly concerned to enhance the profession's awareness of the social and environmental aspects of dams and reservoirs, and to broadening its perspective in such a way that these aspects receive the same attention and conscientious treatment as the technical aspects.

ICOLD TECHNICAL COMMITTEES

On Sunday 11 June, the ICOLD Technical Committee workshops will be held. They aim to present and discuss the content of new work for technical committees in their start-up phase or to present the results of technical committees at the end of their mission. The programme

of these workshops will be published on the website. Workshops are included in the registration fee for the Annual Meeting.

On Monday 12 June ICOLD Technical Committee Meetings will be held.

A	Computational aspects of analysis and design of dams (2020-23)	M	Operation, maintenance and rehabilitation of dams (2020-23)
B	Seismic aspects of dam design (2020-23)	N	Public awareness and education (2021-24)
C	Hydraulics for dams (2021-25)	O	World register of dams and documentation (2021-24)
D	Concrete dams (2021-24)	P	Cemented material dams (2020-25)
E	Embankment dams (2020-23)	Q	Dam surveillance (2017-22)
F	Engineering activities with the planning process for water resources projects (2014-22)	RE	Resettlement due to reservoirs (2021-24)
G	Environment (2020-25)	S	Flood evaluation and dam safety (2020-24)
H	Dam safety (2021-24)	TRS	Tropical residual soils (2020-23)
HWS	Historical water structures (Water Heritage) (2021-24)	T	Prospective and new challenges for dams and reservoirs in the 21st century (2020-23)
I	Public safety around dams (2016-25)	U	Dams and river basin management (2021-24)
J	Sedimentation of reservoirs (2020-23)	V	Hydro mechanical equipment (2016-25)
K	Integrated operation of hydropower stations and reservoirs (2015-23)	X	Financial and advisory (ad hoc committee)
L	Tailings dams & waste lagoons (2020-23)	Y	Climate change (2021-23)
LE	Levees (2018-24)	Z	Capacity building and dams (2021-24)

PRELIMINARY PROGRAM

DAY	GENERAL PROGRAM	TECHNICAL EXHIBITION	SOCIAL PROGRAM	SWEDCOLD WORKSHOPS & SHORT COURSES
June 6-10	Pre Conference Tours			
Friday June 9	Meeting of ICOLD Board			
Saturday June 10	Meeting of ICOLD Board, morning + early afternoon Meeting of ICOLD Board and Chairpersons Tech.Com, late afternoon		Guided city tour	WS1 – All day SC1 & SC2 – All day
Sunday June 11	Techn. Com. WS, morning + afternoon Regional Clubs, late afternoon	Opening of exhibition, afternoon	Guided city tour Welcome Reception in Exhibition hall	SC3 – All day
Monday June 12	Meeting of Tech. Committees Francophone meeting, late afternoon YPF meeting, late afternoon	Exhibition all day		
Tuesday June 13	Symposium 8:00-17:30, Women Mentor ship – Panel session, 13:00-14:00	Exhibition all day	Cultural Evening at Liseberg	
Wednesday June 14	Symposium half day am Young Professionals Forum, evening event	Technical Excursions Exhibition closes, pm	Networking event for Young Professionals	SC4 – AM WS2 & WS3 – PM
Thursday June 15	General Assembly	Technical Excursion	Farewell Dinner at Svenska Mässan	WS4 & WS5 – AM WS6 & WS7 – PM
June 16-20	Post Conference Tours			

SYMPOSIUM THEMES

Management for Safe Dams

Dams are a benefit to the society. The symposium purpose is to share information to maintain or increase the safety of dams and their associated benefits. There is a growing interest from both authorities and investors that contribute to the development and complements ICOLD initiatives. Global Standard On Tailings Management and updating of national legislation and guidelines are examples. Papers and presentations during the symposium will cover six themes (T1-T6) for dams with various purposes such as hydro power, flood control, irrigation, levees and other consumptive uses as well as mine tailings.

T1-Safety Management of Dams and Levees

The topic of dam safety management can cover a broad field of aspects and according to the ICOLD bulletin 154 the system should: "establish a systematic and consistent way of transforming an operating Organisation's values, principles, policies and procedures into the products or outputs of industrial or commercial activities". To be able to evaluate if the dam safety management system maintain operation in line with its defined objectives, monitoring and evaluation is needed. Finally the outcome of monitoring, evaluation, audits and reviews should be used for tuning and updating the dam safety management system in continuous improvements.

T2 – Surveillance and condition monitoring

A reliable and efficient dam safety management system is dependent on input from high quality data on the current status of dams to be able to make knowledge based decisions. Used methods, systems, technologies and Organisational set-up is therefore of major importance to verify the dam safety level and to evaluate current status of the dams and their reservoirs. A challenging part of data evaluation is the definition of relevant alarm and alert levels where different types of action must be taken to prevent a potentially dangerous situation for a dam. On existing dams the condition monitoring and assessment of the current and potential future status, or remaining service-life of a structure could be in focus.

T3 – Analysis, modelling and decision making

Regardless of what type of analysis is carried out, a model is needed, i.e. an image that describes how to interpret the effect on the studied part of the facility, thus forming the basis for the simplifications and assumptions

being made. Analysis can be anything from simple behaviour models via analytical calculations to advanced numerical simulations. The purpose of the analysis is commonly to utilize collected data to investigate if e.g. dams and spillways fulfil the requirements. Aspects on different methodologies and validation of models or definition of acceptance criteria are of major interest to get reliable results as basis for decisions.

T4 – Rehabilitation and dam safety measures

Measures are taken when the deviation from set requirements is not acceptable (now or in the future). It is often a matter of reducing the load, slowing down the development of degrading or increase/restore the performance or capacity. Surveillance with planned inspections, and/or monitoring, evaluating potential development is sometimes selected instead of a physical measure. Lessons learned from projects and incidents can be presented in case studies.

T5- Climate & environmental adaptation

A warmer climate with increasing climate variability will increase the risk of both droughts and floods. The changing climate and increased expectations from the society on dam owners implies actions. One of the challenges for the sustainable energy system is to ensure balance in the power system. Here, hydro power, with its flexibility and cost-effective regulating capability, play a key role. A further challenge is to handle the demand for ecological rehabilitation. Both the aspects on balance of the power system as well as biodiversity must be dealt with the prerequisite to fulfil the dam safety requirements and also handle the potential contradiction between the aspects.

T6 - Innovation

The world is facing an unprecedented change towards electrification driven by the Paris agreement heading towards a fossil-free society. This electrification cannot take place without an updated and sustainable hydro power designed to regulate an increasing amount of intermittent energy sources as well as mining activities for raw materials. Interdisciplinary research and innovative solutions, developed in close cooperation between academia, industry and the public sector will strengthen the position of the dam community. The theme will focus on innovative solutions regarding new technologies and methods that can be related to all the previous themes T1-T5 but with focus on the innovative part.

SHORT COURSES

Short courses will be given on the side-lines of the Annual Meeting. It is possible to register for these courses in addition to participating in the event, registration is mandatory.

The additional fee to cover costs are:

Half day course – 2 000 SEK excl. Vat

Full day course – 3 000 SEK excl. Vat

Short Course 1: Concrete Dam Modelling

– Saturday 10 June (Full day)

The finite element method is a common tool for assessment and design of concrete dams today. Despite this, there are few general and practical recommendations on best practices in numerical modelling. There is therefore a need and interest for practical guidelines focused on numerical analyses of concrete dams among dam engineers and researchers.

Two Swedish guidelines have recently been developed within the topic. In addition to this, the results from past ICOLD benchmark workshops will constitute basis for this short course in numerical modelling of concrete dams.

Course objective

Provide general and practical recommendations and guidelines on how and when finite element analyses may be used to assess the structural behaviour or safety of concrete dams. This includes modelling aspects, material behaviour, degradation and damage, modelling strategies, etc. It also includes recommendations for review of numerical models and results. The methodology given in this report is defined in general terms and is thereby independent on the choice of FE software.

The course is intended for dam engineers, structural engineers and researchers that perform and review numerical analyses of concrete dams.

Lecturers

The short course is arranged by SwedCOLD and main lecturers are Prof. Manouchehr Hassanzadeh, SWECO and Dr. Daniel Rydle, Vattenfall together with invited speakers (TBD).

Short Course 2: Static liquefaction of Tailings

– Saturday 10 June (Full day)

Much focus is directed towards the phenomenon of “static liquefaction” (undrained instability) when assessing stability of tailings dams because of the devastating tailings dam failures that the mining industry has experienced.

Course objective

The objective is to provide demonstrations of

the static liquefaction failure mechanisms (and triggering processes) as it relates to tailings, and the tools used to assess the potential for this behaviour.

Mining and tailings consultants, operators of tailings storage facilities, as well as regulators will find this workshop of interest.

Lecturers

The short course is arranged by SwedCOLD. Main lecturers are Prof. Andy Fourie and Dr. David Reid both from University of Western Australia.

Short Course 3: Risk assessment – Current state of practice for tailing dams

– Sunday 11 June (Full day)

Risk Assessment is a well-documented process that has been used for several decades in many industries including water supply, irrigation and hydro power dams. Although risk assessments for tailings dams are mandatory in many jurisdictions and the Global Industry Standard on Tailings Management (GISTM) requires risks to be reduced to as low as reasonably practicable (ALARP), there is currently no specific guideline available for risk assessment of tailings dams.

The new ICOLD Bulletin 194 partly addresses the issue by providing an overview of the typical risk assessment process. However, for further details the reader is referred to applicable ICOLD and national guidelines, which were primarily developed for water storage dams.

Course objective

The course objective is to present the current state of practice of Risk Assessment for tailings dams, building upon the principles outlined in Bulletin 194, with the view to improve the safety of tailings operations across the world. The intended audience of this course includes dam owners, regulators, authorities, designers and consultants, contractors and NGOs.

Lecturers

The short course is arranged by SwedCOLD and ICOLD Committee L – Tailings Dams and Waste Lagoons and the presenters will include the members of Committee L as well as industry experts in risk assessment.

The short course conveners are Andy Small, Klohn Crippen Berger (KCB), Canada and Jiri Herza, Czech Technical University, Czech Republic.

Short Course 4: Fundamental Tailings Dam Safety & ICOLD Bulletin 194

– Wednesday 14 June (AM)

Tailings Dam Safety has become a world-wide focus after devastating tailings dam failures

that the mining industry has experienced, Mount Polly, Samarco and Brumadinho to mention a few. This has resulted in important initiatives worldwide, including involvement of major investors with publishing of the Global Industry Standard on Tailings Management (GISTM) presenting a framework for safe tailings facility management. This document provides high-level Principles and is supported by various industry guidelines on governance; however, these do not give the technical detail required for practitioners working in the tailings industry to comply with the requirements of the Standard. This is where ICOLD have stepped up with the new Bulletin 194 on Tailings Dam Safety (English preprint available on the ICOLD web page). The new Bulletin provides a comprehensive coverage of all aspects of tailings dam safety to provide explanation of the principles behind the GISTM but also provides the technical detail and guidance to assist practitioners to develop safe, stable tailings management structures.

Course objective

Presentations will cover “Why do we do it?” A look at lessons learned from past failures, the development of the GISTM, how Bulletin 194 addresses and supports the GISTM then delves into some detail of the Bulletin topics of Consequence Classification, hydro technical design & water management, dam breach analysis and tailings dam closure.

This course would be of value to anyone working with Tailings Dams, i.e. dam owners, regulators, authorities, designers and consultants, contractors and NGO:s.

Lecturers

The short course is arranged by SwedCOLD and ICOLD Committee L – Tailings Dams and Waste Lagoons. Main lecturers are Annika Bjelkevik, Tailings Consultants Scandinavia (TCS) Sweden, David Brett, GHD Australia, Andy Small, Klohn Crippen Berger (KCB) Canada and Paul Ridlen, Knight Piésold USA.

SWEDCOLD WORKSHOPS

Workshops are included in the registration fee for the Annual Meeting and it is possible to register for these workshops in addition to participation in the event, registration is mandatory.

Workshop 1 – Defect detection in embankment dams

– Saturday 10 June (Full day)

Vattenfall has, in accordance with the Swedish dam safety guideline, designed and then built an experimental embankment dam at their laboratory facilities in Älvkarleby. The dam has six built-in defects, that all represents damages that eventually could evolve to a dam break.

These defects are sized to be realistic, while still large enough to be realistically detected in blind-tests by suitable geophysical methods.

The workshop will cover the following topics:

- pre-modelling measurements & technology
- data presentation
- evaluation/post-modelling

This workshop will be presented by Prof. Peter Viklander, Vattenfall and Dr. Sam Johansson, HydroResearch.

Workshop 2 – Rock engineering issues

– Wednesday 14 June (PM)

Rock engineering issues are constantly present for dams e.g. for foundations, abutments

and spillways. The problems arising with ageing dams are particularly interesting when talking about long term functionality of grout curtains, control of up-lift pressure under dams, reinforcement bars & cables and erosion in rock spillways. The awareness of these problems are arising in the industry. The discussion on questions related to rock and rock foundations could be of interest not only for the dam owner but also for consultants, contractors and academia. Issues regarding design, construction and refurbishment will be discussed as well as general questions on durability and effectiveness. Items for discussion can be e.g.:

- Long-term function of grout curtains
- Refurbishment methods of grout curtains
- Rock erosion in spillways
- Control of up-lift pressure under dams

Dr Fredrik Johansson, Royal Institute of Technology

Workshop 3 – Best Practices for Tailings Dam Breach Analysis

– Wednesday 14 June (PM)

This is a joint workshop between CDA and Svemin regarding Tailings dam Breach Analysis.

The workshop will be based on new bulletins from both CDA and Svemin.

This workshop will be presented by Mamun Al-Mamun, Tetra Tech, Pierre-Louis Ligier, Sweco, Anna Risberg, Sweco and Sara Töyrä, LKAB.

Workshop 4 – Operational safety of dams and reservoirs

– Thursday 15 June (AM)

Investigations of incidents and major accidents related to dam safety show that the characteristics of those events is often complex. It can seldom relate to only a single technical issue. Traditional methods for safety analysis of dam operations are very helpful, however, the complexity of dam systems operations requires more sophisticated approach and tools. Items covered in the workshop:

- Flow control failures in dam safety
- Management, control and operation
- Systems and systems engineering
- Modelling dam and reservoir systems
- Hydrological modelling and river flow routing
- Reservoir and outflow control
- Disturbances
- Release function and human factors
- Discharge conveyance function
- Simulating flow control operations

This workshop will be presented by Greg Baecher, University of Maryland Des Hartford, BC Hydro and Romanas Wolfsborg, Vattenfall.

Workshop 5 – Environmental adaptation of dams

– Thursday 15 June (AM)

Swedish hydro power is going to be modernized through a national plan, in order to achieve the greatest possible benefit for both the environment and national access to electricity. The national plan is to be carried out over the timespan of 20 years and will ensure that hydro power plants in Sweden follows the modern environmental legislation such as the EU Water Framework Directive. This process will be a concern for – 2000 HPP and – 100 large dams.

One of the mayor challenges for the Swedish hydro power industry the coming 20 years is to implement environmental mitigation measures on the dam facilities and their operation with maintained dam safety.

To set the context the workshop will start on lecture-format to give participants a baseline of knowledge in both environmental problems induced by large dams, and how the mitigation measures might induce dam safety risk. As introduction a few words about the Swedish National plan is needed (goals, stakeholders & statistics). The main part of the workshop starts where participants will work in groups on hypothetical future dam re-licensing projects to find conceptual designs which create synergies between environmental mitigation

measures and dam safety upgrades. Workshop coordinator: Joakim Thanke Wiberg, The Hydroelectric Environmental Fund

Workshop 6 – Capacity Building

– Thursday 15 June (PM)

The field of dams (including design, construction and operation) is experiencing a lack of capacity (worldwide) when it comes to the number of well experienced engineers as well as new young engineers. This is relevant to the entire dam industry including water dams, hydro power dams and tailings dams. ICOLD has already taken initiatives through the two Committees; ZX2 – Young Professionals Forum and Z – Capacity Building.

The objective of this workshop is, to contribute to these initiatives by allocating time for an open discussion and dialogue on how ICOLD can help in retaining and attracting the number of people in these industries (water and tailings dams) as well as how to increase the level of knowledge within this group to improve dam safety. Focus during the workshop will be to get everyone's ideas and opinions heard by allowing for discussions in different forms. The "result" will be documented as a road map with suggestions on how to continue the work on Capacity Building within ICOLD.

Several parties will take an active part in this workshop; ICOLD technical committee Z – Capacity Building, XY2 – Young Professionals, L – Tailings Dams and Waste Lagoons, US committee on Diversity, Equity and Inclusion, Universities, Companies and special guest Dr. Katarina Graffman (anthropologist).

Workshop 7 – Strategies and adaptation to a changing climate

– Thursday 15 June (PM)

Technical session and panel discussion on dam safety in a changing climate. The workshop will include sharing of experiences and practices regarding adaption of dams to changes in magnitude, frequency and seasonality of natural loads and related hazards such as floods, storms, ice, heat waves, landslides, and forest fires.

The topics include:

- Climate impacts and risks
- Adaptation through operation and preparedness planning.
- Adaptation through design and upgrading
- Strategies, guidelines and regulation for a changing climate.

This is an interactive workshop co-ordinated by Svenska kraftnät, intended for dam owners, consultants, researchers and authorities involved in climate adation work & dam safety.

YOUNG PROFESSIONALS

ICOLD 2023 will offer a unique learning opportunity for individuals from around the world who are in the early stages of their careers. As well as specific events and initiatives targeted at these delegates, the ICOLD 2023 event integrates young professionals into all aspects of the program.



Young professionals are especially encouraged to attend ICOLD Technical Committee meetings and workshops, in addition to the Symposium and other events. Attendance will provide a unique opportunity to engage with technical subject matter experts from around the world and participate in the development of leading practices.

The Young Professional program will include:

- ICOLD Young Professionals Forum
- Networking event for young professionals
- Young professional paper award
- Young professional poster award
- Sponsorship categories to support young professionals
- Mentorship opportunities
- Information booth in Exhibition Hall

Companies and ICOLD National Committees will benefit by having young professionals attend this international event, where they can establish contacts with technical leaders and Organisations at the forefront of dam engineering. This exposure will enable them to take the lessons learned back to their home Organisations to improve projects and practice.

Note: for the purposes of registration delegates are to be 35 years of age or under as of the June 10, 2023. However, participation in the ICOLD Young Professionals Forum, and their activities, 40 years of age and under.

Young Professionals Forum meeting

11th annual meeting of the Young Engineers Forum – a chance to meet and discuss with other young professionals in ICOLD. All ICOLD members up to 40 years old have the right to vote at the meeting.

Networking event for Young Professionals

Welcome to a joyful evening on Wednesday 14th of June just for young professionals at the intriguing Universeum museum!

Cost is included in the registration fee but registration is mandatory.

Young Professional paper & poster award

The Swedish committee will present an award to the best paper and best poster presented by a young professional at the Symposium.

Mentorship session

Attending young professionals will have the possibility to register for a mentorship session. The mentorship session is an opportunity for young professionals to meet and discuss a certain topic with senior colleagues over lunch. The purpose of the mentorship sessions is to encourage exchange between experienced members and young professionals. The mentorship lunch will be in small groups of one mentor and up to five young professionals. More information will be available on the website.

TECHNICAL EXCURSIONS

We reserve the right to cancel any technical excursion if there is not enough persons booked on a particular tour. For security reasons, restrictions may also apply.

Technical Excursion 1: Lilla Edet | Trollhättan-Locks



Date: 14 June or 15 June
Time: 09:00-18:00
Cost: 600 sek excl. Vat

This technical excursion will be visiting the hydro power plant Lilla Edet. This is one out of four hydro power plants in the river Göta Älv, draining the largest lake in Sweden, Vänern, flowing out in Kattegatt on the west coast of Sweden. Lilla Edet is under re-construction where the old spillways are being replaced. The new construction must be able to withstand higher expected water-flows than before. During our visit we will learn more about the re-construction which is planned to be completed by the end of 2025.

After our visit at Lilla Edet, we will go to the city of Trollhättan, located by Göta Älv. Göta Älv has six ship locks, of which four are in Trollhättan. The locks used in Göta Älv were opened in 1916 and are planned to be replaced by new locks by 2030. We will also have a tour around the historical locks, with the oldest from 1800 to the once being used today.

Technical Excursion 2: Rydal-Kinna | Kinnaström



Date: 14 June
Time: 09:00-17:00
Cost: 600 sek excl. Vat

On this technical excursion we will learn the importance of hydro power and dams for the textile industry. Along the river of Viskan there were many textile factories in the beginning of the 20th century. Many of these factories built their own power plants to be able to provide their factories with electricity.

In 1917 the company Viskans Kraft AB was started with the aim of building more hydro power plants to be able to provide electricity to the factories in the nearby area. We will learn more about Viskans Kraft and get to see two of the power plants built by Viskans Kraft, Kinna (1937) and Kinnaström (1953).

Technical Excursion 3: Håverud-Dals Långed



Date: 14 June
Time: 08:00-18:00
Cost: 600 sek excl. Vat

On this technical excursion we will travel north from Gothenburg to Håverud and travel by boat on the Dalsland Canal and river Upperudsälven. The canal enables ships to travel between lake Vänern and central parts of Dalsland, all the way up to Hånsfors in Värmland, and was of great importance for the industries in the area from the mid-1800s and the century thereafter.

As we arrive in Håverud we will have a look at the aqueduct, the locks, the dams and hydro power plant. We will then board one of the canal ships and travel slowly upstream while guides will tell us more about the intertwined industrial history of iron production, paper mills, hydro power and transport along river Upperudsälven. Along the trip we will have lunch and pass locks at Buterud and Mustadfors, where a very old mill the heart of the Mustad Group, the worlds largest manufacturer and seller of horseshoes and horseshoe nail.

The boat trip will end in Dals Långed at its hydro power plant.

We will return to Gothenburg by bus.

Technical Excursion 4: Flood Protection Gothenburg

Date: 14 June
 Time: 13:30-17:00
 Cost: 600 sek excl.

On this technical tour we will talk about the flood protection of the city which is a part of making Gothenburg more resilient to the effects of climate changes. The city of Gothenburg has experience floods several times in the last decade. Due to the fact that Gothenburg is located along the west coast of Sweden with a large river, Göta älv, running through the city, Gothenburg is prone to flooding from both rising sea levels and extreme river flow. We will travel by boat through Gothenburg and presentations will be held by the city of Gothenburg, the Consultants (Sweco) and the dam owners (Vattenfall). We will visit the flood protection measures that have already been constructed and hear about the other mitigation

measures and structures that are planned to be implemented in the future.



PRE- & POST-CONFERENCE TOURS

We reserve the right to cancel any pre- or post conference tour if there is not enough persons booked on a particular tour. For security reasons, restrictions may also apply.

PRE-CONFERENCE TOURS

Study Tour 1: The northern ore fields with focus on Tailings management

Date: Pre-conference 6-9 June
 Time: TBA
 Registration fee with single room and flights: 11 900 sek excl. Vat
 Registration fee with double room and flights: 10 150 sek excl. Vat

Day 1 – We will meet up at Arlanda airport around noon to travel up to Kiruna. We will stay at the same hotel in Kiruna the whole tour. After settling in, we will visit Jukkasjärvi and the famous Ice hotel 365 a year-round ice art exhibition of the ice hotel that is built up by ice and snow every winter. We will also visit an outdoor museum about the Sámi culture.

Day 2 – In the Visitors Centre we will listen to LKAB’s vision of fossil free steel production and learn about its operation including mining, ore processing and tailings management as well as the ongoing urban transformation. The day will then continue with a visit to the Kiruna tailings management facilities, TMF.

Day 3 – On the third day we will visit the Svappavara operation and learn about the process from the mine to final product. We will also visit the Svappavaara TMF where the LKAB deposit high thickened tailings. We will close the day with a dinner and beer testing with the local microbrewery under the midnight sun.

Day 4 – After a common lunch we will start the transfer to the airport to continue the journey towards Göteborg. The time between breakfast and lunch can be spent to explore the new city centre of Kiruna by foot or just sleeping in.



© Hans Berggren



© Fredric Alm

Study Tour 2: Norrland hydro power plants

Date: Pre-conference 6-10 June

Time: TBA

Registration fee with single room and flights:
19 100 sek excl. Vat

Registration fee with double room and flights:
16 800 sek excl. Vat



Day 1 – We will meet up at Arlanda airport around noon to travel up to Kiruna. After settling in at the hotel, we will visit Jukkasjärvi and the famous Ice hotel 365.

Day 2 – The second day will start with a trip to Porjus dam, the first hydro power plant built along Luleälven River in the early 1900s.

Day 3 – We will start with a visit to Suorva dam, Sweden’s largest artificial reservoir. In the afternoon we will visit Satisjaure and Akkats hydro power dams.

Day 4 – The final day of the study tour will begin with a visit to Measure dam, a 100 m high rock fill dam. In the afternoon we will visit the Boden power station and dam. The visit to the Boden dam also includes a visit to the fish farm. In the evening we will arrive in Luleå where we eat before we fly to Stockholm.

Day 5 – A morning flight to Gothenburg, arriving at lunchtime.



Study Tour 3: Älvkarleby tour

Date: Pre-conference 8-9 June

Time: TBA

Price:

Registration fee with single room:
7 200 sek excl. Vat

Registration fee with double room:
6 900 sek excl. Vat

Day 1 – The first day we will meet up in Stockholm (bus will depart from the city centre with a pick-up point at Arlanda airport) and travel to Älvkarleby. At Älvkarleby we will visit the laboratory of Vattenfall Research and Development, where we, among others, will see the experimental dam that will be in focus on one of the SwedCOLD workshops during the conference. After lunch we will visit the hydro power plant in Älvkarleby.



Day 2 – In the morning we will travel to Forsvik bruk. Here we will learn about the industrial history of the area and the importance of Göta Canal for the area. After lunch we will continue to Gothenburg where we will arrive in the afternoon.



POST-CONFERENCE TOURS

Study Tour 4: Norway – Sweden tour

Date: Post-conference 16-20 June

Time: TBA

Registration with single room:

17 000 sek excl. Vat

Registration with double room:

14 500 sek excl. Vat

Day 1 – The first day we will leave Gothenburg in the morning and travel to Rjukan in Norway. Here we will visit Såheim, which was taken into operation in 1916.

Day 2 – In the morning we will visit the Industrial Workers Museum in Rjukan. After this we will travel to the capital of Norway, Oslo.

Day 3 – We will leave Oslo in the morning and travel over the Swedish border and visit the highest dam in Sweden, Trängslet. Trängslet is currently under re-construction and being retrofitted with new bottom outlet. After our



visit here we will drive to Sälen, a popular resort for outdoor activities, where we will stay for the night.



Day 4 – In the morning we will visit Höljes with its 81 m high moraine core earth fill dam that has been refurbished and fitted with additional spillway capacity in recent years. After having lunch our trip continues to Letafors. During our visit, the Letafors dam will be undergoing a rehabilitation project involving installation of a new seepage monitoring system and a new toe berm.

Day 5 – In the morning we will travel to Arvika where we will get a presentation regarding the recently constructed flood protections dams and levees. After lunch we will have our final stop at Dals Långed. We will look at the dams, fish ways and spillways. In late afternoon we will return to Gothenburg.

Study Tour 5 – Iceland tour

The study tour to Iceland is arranged in collaboration with the Icelandic Committee on Large Dams.

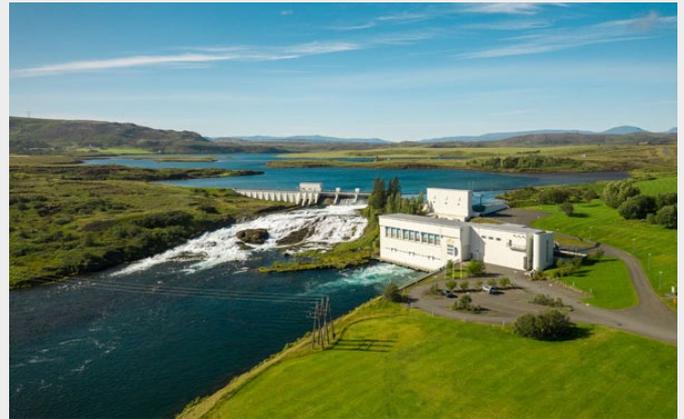
Date: Post-conference 16-19 June

Time: TBA

Registration fee with single room (no international flights included): 19 300 sek excl Vat

Registration fee with double room (no international flights included): 15 200 sek excl. Vat
 Registration fee with single room and flights: 21 100 sek excl. Vat
 Registration fee with double room and flights: 17 000 sek excl. Vat

Day 1 – Departure from Gothenburg to Reykjavik by flight around noon. Flights to Iceland can either be booked through us or by yourself. As we arrive in Reykjavik in the afternoon, we will have some time to explore the capital of Iceland after we settle in at the hotel.



Day 2 – In the morning we will fly to the east where we will visit Iceland’s largest dam, Kárahnjúkar dam, which is also the tallest concrete-faced rock fill dam in Europe. In the afternoon we will visit the Snæfellsstofa Visitor Centre where we will learn more about the Vatnajökull Glacier National Park. Dinner will be eaten in Egilsstaðir before we fly back to Reykjavik in the evening.

Day 3 – In the morning we will leave to Þjórsá and Tungnaá river area, we will get to visit Vatnsfell dam and Sigalda dam.

Day 4 – We will travel towards Reykjavik with a stop at the Sog area. Here we will visit several power plants, including Ljósafoss Power Station, one of the oldest dams in Iceland. The drive back will go through Þingvellir National Park.



SOCIAL EVENTS

Welcome Reception

Date: Sunday, June 11

Time: 19:00-20:30

Place: Exhibition hall at the venue Svenska Mässan

Price: Included for delegates, exhibitors, and accompanying persons. Pre-registration is mandatory.

Mingle and meet with old and new colleagues during the welcome reception and opening of the exhibition at the conference venue. The reception is hosted by the City of Gothenburg and Region Västra Götaland. The Welcome reception includes light finger food, beverage, and entertainment.



City of Gothenburg



VÄSTRA GÖTALANDSREGIONEN

Cultural Evening

Date: Tuesday 13 June

Place: Liseberg

Time: 19:00-21:30

Price: Included for delegates (member, non-member, symposium and young professionals) and accompanying persons. Pre-registration is mandatory.



Mingle with drinks, food and entertainment at Liseberg amusement park in the area of the park called “the Harbour area” which is exclusive for ICOLD attendees this evening. Liseberg is a park for everyone. Since 1923 we have brought millions of people together to have fun. The park offers adventure, music, games, good food and beautiful gardens. With rides and attractions, cuddly rabbits, food, drink and entertainment on stages and at the theatre, Liseberg offers something for everyone all year round. Put simply, the most fun in Scandinavia is found in Gothenburg! As a delegate registered for the cultural evening you have access to visit the rest of the park before and after the event.

Farewell Dinner

Date: Thursday 15 June

Time: 19:00 – 23:00

Place: Congress Hall, Svenska Mässan

Price: Included for delegates (member, non-member, and young professionals) and accompanying persons. Pre-registration is mandatory.

The ICOLD 2023 Farewell Dinner includes a 3-course dinner, beverages, and entertainment.

Dress code: Smart or traditional



SOCIAL TOURS

A number of social tours have been arranged for both delegates and accompanying persons to explore and enjoy your stay in Gothenburg and its surroundings.

In addition to the tours offered below there is plenty to explore in and around Gothenburg, - see next page- Things to do in Gothenburg.

Guided Bus tour of Gothenburg (English and French)

Date: Saturday 10 June and Sunday 11 June
 Time: 14:00-15:30
 Departs from Svenska Mässan, Entrance no 8
 Address: Mässans gata 8
 Price: No cost but registration is mandatory

Strömma Kanalbolaget

Brunch Cruise in Gothenburg Archipelago brunch with M/S Göteborg
 Date: Sunday 11 June
 Time: 12:00-15:00
 Price: 600 sek excl. Vat

M/S Göteborg is a beautiful boat built in 1915.



The upper deck has a lounge and a large sun deck that offers a unique view while the boat cruises through the archipelago. On the buffet table you will find everything from salmon and archipelago classical herrings to homemade meatballs, cheese platter and fresh salads.

Shrimp and Salmon cruise with Live Music

Date: Monday 12 June
 Time: 18:30-21:30
 Price: 750 sek excl. Vat

Do you like the sound of delicious food from the sea, live music entertainment and a cruise through the archipelago with the best views from a classic ship?

Then this luxurious Shrimp and Salmon cruise is for you! The cruise includes a welcome drink, plenty of shrimp, salmon and herring dishes, mussels and salads with live music

entertainment and views of the Gothenburg archipelago.

Nordic Water Colour Museum

Guided tour to the Nordic Watercolour Museum in Skärhamn (English)

Date: Tuesday 13 June
 Time: 09:00-16:30
 Price: 950 SEK excl. Vat (incl. guided bus transfer, admission to museum and lunch at the museum)

In the small coastal town of Skärhamn on the island of Tjörn you will find The Nordic Watercolour Museum. Here you can see exhibitions from all over the world, take part



in exciting events, experiment with colour and eat delicious food. Due to the museum's unique location right on the shore, the art experience can be combined with a swim in the sea for those who wants.

Guided boat tour of Gothenburg with the Paddan boats (English)

Date: Wednesday 14 June
 Time: 10:00-11:00
 Price: 240 sek excl. Vat

Step aboard our Paddan sightseeing boat in the centre of the city at Kungssportsplatsen. See the old moat and canals that date from the 17th century while learning about the history of Gothenburg's construction and defence. The classic city tour on the Paddan boats shows you the beauty of Gothenburg from a waterside perspective. The tour takes you under 20 bridges and out to the harbour.

We reserve the right to cancel any social tour if there are not enough persons booked on a particular tour.

THINGS TO DO IN GOTHENBURG

Gothenburg is an old harbour city located on the Swedish west coast. Founded almost 400 years ago the city blends a distinct feeling of charm with the pulse of modern urban life. In less than 30 minutes from the downtown area you'll be on a ferry to explore the tranquil archipelago. The city is filled with flourishing gardens, historic sites and buildings, beautiful churches and magnificent museums, and the tram rattled streets are lined with pleasant cafés and restaurants.



©Emil Fagander Göteborg&Co



©Frida Winter Göteborg&Co

Take the opportunity in conjunction with ICOLD 2023 to explore Gothenburg.

Gothenburg is an international city with a lot of green parks, interesting architecture and historical sites. The ICOLD 2023 accompanying persons program will include activities for all interests: art, history, cycling, shopping and more, both in Gothenburg and in the region.

On the Gothenburg Tourist Centre website you can find out more about the city and what to do. Here are some highlights: www.gothenburg.com

- You can get out to the archipelago of Gothenburg and its craggy coast and picturesque fishing villages in less than an hour. Spend a day in the archipelago of Gothenburg.
- Classical tour with the sightseeing boat Paddan along the canals of Gothenburg. Or sightseeing with a Hop on – Hop off bus in Gothenburg.
- Gothenburg is the hometown for the car manufacturer Volvo. Take the opportunity to visit the Volvo museum and learn more about its heritage.
- Experience Liseberg! At the greatest amusement park in Scandinavia, lots of things are pretend, but the experiences are real. You'll find everything from dizzying rides to music and dance.
- Looking for an easy and eco-friendly way to explore the city? A guide to some of Gothenburg's bike rentals is found on the Travel Information page.



© Simon Paulin

HOTEL INFORMATION

Welcome to book your accommodation in Gothenburg for ICOLD 2023 when registering to the conference!

Sweden Meetx is the official provider of hotel rooms for the conference delegates partaking in ICOLD 2023 and a number of hotel rooms in different price categories have been pre-booked in Gothenburg for the event. Hotel Gothia Towers is the venue hotel located in direct connection to the conference venue, the Swedish Exhibition and Congress Centre (Svenska Mässan).



Hotel	Rate/night from	Walk to the venue
Hotel Gothia Towers – Venue Hotel	1509 sek excl. Vat	0 min
Scandic Opalen Hotel	1598 sek excl. Vat	8 min
Hotel Scandic Rubinen	1598 sek excl. Vat	12 min
Quality Hotel The Weaver	1295 sek. excl. Vat	16 min by tram
Quality Hotel Panorama	1116 sek excl. Vat	10 min
Spar Hotel Gårda	978 sek excl. Vat	20 min

Price quotes above are for single rooms. All rooms include breakfast and free WiFi. All prices quoted are in Swedish Kronor (SEK) and excluding 12 % VAT. More information about the hotels you can find on the website.

REGISTRATION INFO

REGISTRATION FEE MEMBER *

Early Bird – until 27 March
SEK 12 700 excl. Vat

Regular – from 28 March
SEK 14 600 excl. Vat

REGISTRATION FEE NON MEMBER

Early Bird – until 27 March
SEK 17 900 excl. Vat

Regular – from 28 March
SEK 19 600 excl. Vat

REGISTRATION FEE YOUNG PROFESSIONAL **

Early Bird – until 27 March
SEK 9 500 excl. Vat

Regular – from 28 March
SEK 10 500 excl. Vat

Registration fee Member and Non-member

Includes:

- Admission to the Annual Meeting, Symposium, SwedCOLD Workshops and ICOLD Technical Committee Workshops
- Symposium Proceedings (Digital)
- Access to Technical Exhibition from Sunday 11 June to Wednesday 14 June
- Coffee breaks and lunches from Sunday 11 June to Thursday 15 June
- Social programme and city tour
- Delegate bag

Registration fee Symposium

Includes:

- Admission to the Symposium
- Access to Technical Exhibition from Tuesday 13 June to Wednesday 14 June
- Coffee breaks and lunches from Tuesday 13 June to Wednesday 14 June
- Cultural evening on Tuesday 13 June

Registration fee Young Professional

The Young Professional fee applies if you are 35 years of age or under as of 10th June, 2023. To register as Young Professional you must be able to provide proof of age upon registration on-site.

Includes:

- Admission to the Annual Meeting, Symposium, SwedCOLD Workshops and ICOLD Technical Committee Workshops
- Admission to the Young Professional Forum meeting
- Possibility to register for mentor ship lunch
- Symposium Proceedings (Digital)
- Access to Technical Exhibition from Sunday 11 June to Wednesday 14 June
- Coffee breaks and lunches from Sunday 11 June to Thursday 15 June
- Social programme and city tour
- Networking event for Young Professionals on Wednesday 14 June
- Delegate bag

REGISTRATION FEE SYMPOSIUM

Early Bird – until 27 March
SEK 4 500 excl. Vat

Regular – from 28 March
SEK 5 000 excl. Vat

REGISTRATION FEE ACCOMPANYING PERSON

Early Bird – until 27 March
SEK 4 500 excl. Vat

Regular – from 28 March
SEK 5 000 excl. Vat

*Your country must be an ICOLD Member when you register

**Supporting documents to be provided at the time of registration.

The registration fee excludes 25% VAT

Registration fee Accompanying person

Includes:

- Access to the opening ceremonies of the Symposium
- Coffee breaks and lunches from Sunday 11 June to Thursday 15 June
- Social programme and city tour
- "Go City Gothenburg Pass" – the card is filled with entrances to sights, museums and sightseeing
- Accompanying persons bag

Registration Instruction for Presenting Authors

Each accepted ICOLD paper selected for oral presentation or poster must have the presenting author registered before 17 April in order to be included in the program.

Visa Letter

Individuals requiring an official letter of invitation in order to obtain a visa and authorisation to attend the meeting can contact the secretariat. Information is available at the website.

Cancellation of registration fees, workshops, tours and social events

For any cancellation, the following cancellation fee will be applied:

- Before 28 February 2023: full refund fee less an administrative fee of SEK 500 excl. VAT
- From 1 March to 3 April 2023: 50% of fees will be charged
- From 4 April 2023: no refund

If you cannot attend the conference, your registration is transferable to another member of your organisation, and an administrative cost of SEK 500 will be charged.

All cancellations or changes should be done in written form to: icold2023@meetx.se

Conference Secretariat

Sweden Meetx AB is the congress bureau handling the congress secretariat for the ICOLD2023 conference.

E-mail: icold2023@meetx.se Phone: +46 31 708 86 90

TRAVEL INFORMATION



© Maria Bartsch

By Plane

International airport: Göteborg Landvetter (GOT).

A super-efficient one-terminal airport, with 80 direct routes and 90 arriving flights per day (70% international). Landvetter airport is located just 20 minutes away from the conference location, easy to reach by taxi or by airport bus (bus stop in front of the conference venue).

By Rail

Main train station: Göteborg Central (bus/tram stop: Centralstationen or Nordstan)

Gothenburg is well-connected by fast trains to Copenhagen, Oslo and Stockholm (about 3,5 hours). The main train station is located only 15 minutes away from the conference location, easy to reach by taxi or public transport (buses: Grön Express, Röd Express | trams: 2, 13).

By Car

There is an extensive European Road Network, including a bridge connection between Sweden and Denmark. In Gothenburg there are many parking options within 300 metres from the conference venue.

Getting around in Gothenburg

Gothenburg is a very "green city" and getting around is easy there are trams and buses as well as bicycles to rent and even battery scooters. The venue is located comfortably

within the central area of the city as are most of the hotels.

Local Transportation

The Swedish Exhibition Center or "Svenska Mässan" is located on Mässans gata.

The closest tram stop is called "Korsvägen".

From the train station you will find a tram stop just outside at Drottningtorget. Take tram No. 2, 4 or 13 to tram stop "Korsvägen".

For travel information and travel planner download the app "To Go" or visit the website: www.vasttrafik.se

You can buy tickets in most convenience stores such as Pressbyrå, 7-eleven etc. or pay with credit card on the trams (not on the bus).

Please note that no cash are accepted on buses, boats or trams.



GENERAL INFORMATION

Visa Letter Enquiry

All participants who need a Visa Confirmation Letter are requested fill out the needed information in the digital form. Please note that visa application letter will be sent only after completed and fully paid registration.

Language

The main language that will be used during the conference is English.

Simultaneous interpretation between English and French will be provided during the following sessions:

- Opening of the Symposium on Tuesday morning 13th June
- General Assembly on Thursday 15th June.

Currency

The official currency is Swedish Krona (SEK)
 USD 1 = SEK 10,2 (January 2023)
 EUR 1 = SEK 11,1 (January 2023)

Conference Venue

Svenska Mässan, The Swedish Exhibition & Congress Centre
www.svenskamassan.se

Information about restaurants and bookings at the venue and hotel

For information about restaurants at the venue, Gothia Towers restaurants and table reservations please visit www.gothiatowers.com

During the conference days all ICOLD delegates has a special price on beer/wine at the hotel lobby café and bar Twentyfourseven, please show your name badge to get the happy hour price <https://en.gothiatowers.com/eat/twentyfourseven/>

Exhibition

The Exhibition will take place in Hall D and E. The conference participants have automatically access to the exhibition. Exhibition opening hours is during conference hours.

On-site Registration

The Conference Registration desk is located in entrance number 8 at Svenska Mässan. You do not need to register for the exhibition as the Conference badge gives you full access to it. Registration opening hours: TBA

To collect your badge on-site you need to bring the email confirmation (electronically in the phone works fine) or the text message that has been sent to you in advance, containing the bar code that you will be scanning in the self-service desks in the registration area. Delegate

badges must be worn at all times to gain access to the conference sessions, exhibition and social events. Please note that we cannot replace lost badges.

Cloakroom

There are cloakroom facilities in the registration area. The organisers cannot be held responsible for damage to or loss of their personal property howsoever caused.

Cloakroom opening hours: TBA

Currency & ATM Machine

The currency in Sweden is the Swedish Krona (kr) / SEK. The venue has an ATM Machine located by the main entrance number 5. Some places do not accept cash, credit card is the most common way to pay in Sweden.

First Aid

There is a paramedic in the venue. In case of medical need, please come to the on-site registration desk or go to the Exhibitor Service Desk and we will help you. If medical emergency please call 112.

No smoking policy

According to Swedish law, smoking is prohibited inside any building, venue, hotels, buses, etc. Smoking is only allowed at open air zones.

Lost-and-Found

Lost-and-Found will be collected in the registration desk.

Insurance

The Organisers cannot be held responsible for accidents to participants or for damage to or loss of their personal property howsoever caused.



CONFERENCE VENUE



Swedish Exhibition & Congress Centre / Svenska Mässan

The venue of the ICOLD ANNUAL MEETING 2023 will be the Swedish Exhibition & Congress Centre, Svenska Mässan, the biggest organiser of trade fairs, exhibitions and events in Scandinavia with 100 years of experience.

The Swedish Exhibition & Congress Centre is a state of the art and all-inclusive, amazing venue located in the heart of the city. Hotels, restaurants and cafés, parks, culture and shops are conveniently located within walking distance. The extensive premises and all the experienced personnel ensure each event runs like clockwork providing an enjoyable and memorable experience to anyone visiting.

Quality & Sustainability

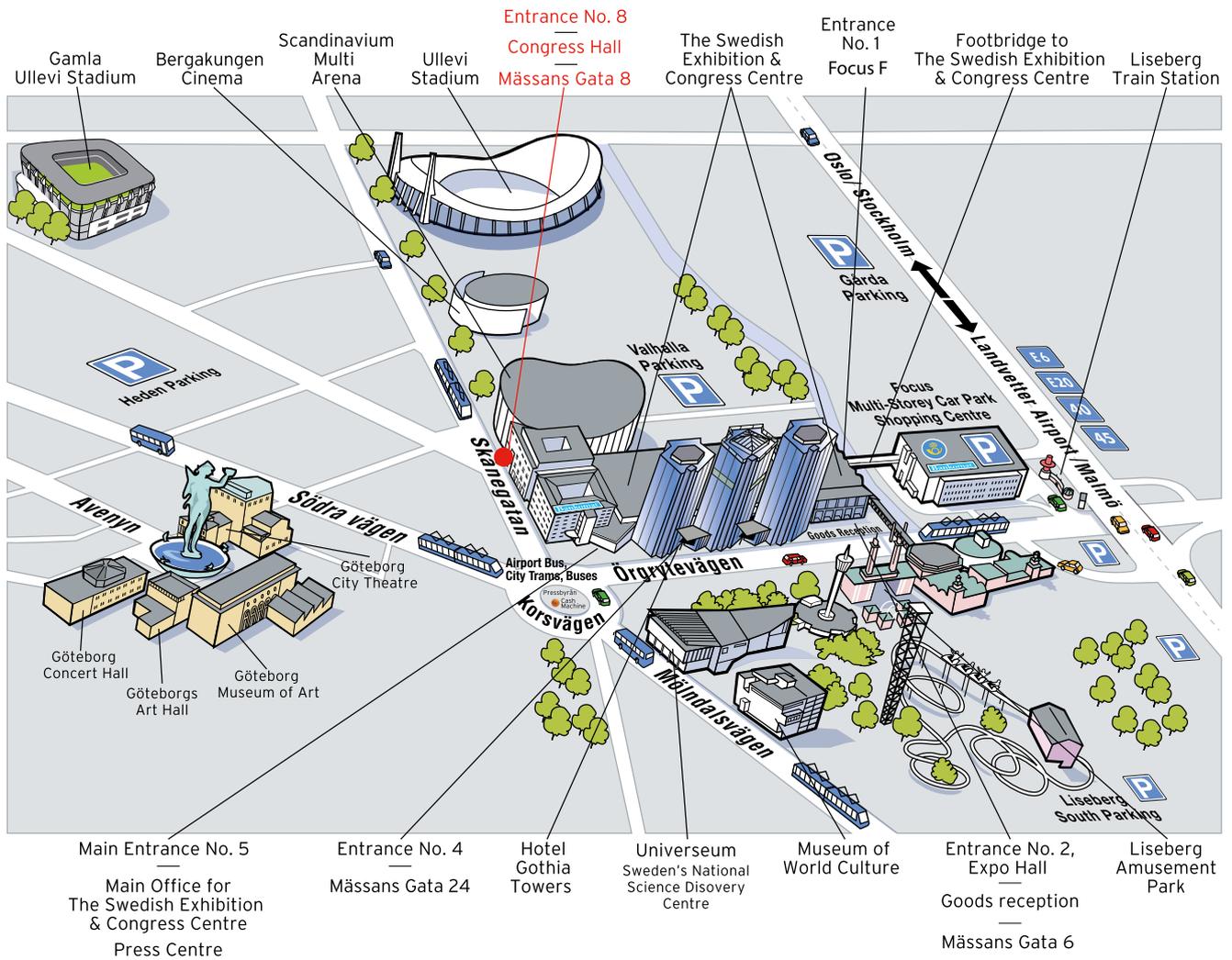
With 1200 hotel rooms, numerous conference and meetings facilities as well as large halls and arenas all located under the same roof The Swedish Exhibition & Congress Centre can accommodate and provide a top class experience.

Sustainable development is also a very important consideration The Swedish Exhibition & Congress Centre take seriously. The belief is that a good meeting place should take both people and the environment into consideration. Read more here www.svenskamassan.se



VENUE FACTS:

- City-centred all-inclusive and well connected venue
- 41,000 sqm exhibition space
- 60+ meeting rooms
- Auditorium style plenary seats 1,500 persons
- 1,200 hotel rooms
- 8 restaurants and 5 bars; from 24 hours grab n' go café to Guide Michelin starred
- Several banquet halls
- Generous net-working areas
- Free Wi-Fi and latest technical equipment
- Eco-certified, 100% powered by wind energy
- 24 hour service
- ATM services on site
- Airport bus stop outside, 20 minutes from airport



ICOLD 2023 SPONSORS
Confirmed by 20th January 2023

PLATINUM



GOLD



SILVER



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