



CEEC
THE FUTURE

2023 Annual Report

OUR MISSION

To accelerate the adoption of eco-efficient minerals and metals production practices.

OUR VISION

Is to support the global resources sector to provide the minerals and metals for society with the lowest impact, including water, emissions and wastes. We will do this through knowledge sharing, cross sector collaboration, and advocacy of eco-efficient practices.

A Year's Overview

CHAIR'S REPORT



The annual report and upcoming AGM are a good opportunity to reflect on a busy 2023 for CEEC International (CEEC). We're proud of the work we've completed during the year and have big plans to increase our reach and kick start important initiatives during 2024. The drivers for sustainable mining practices continue to accelerate and there is an ever-growing recognition that mining and minerals processing are critical to the achievement of global goals with respect to the energy transition and decarbonisation.

I would like to acknowledge the support of all of our sponsors, who are directly responsible for all of the work we do at CEEC. This year also, we have introduced a premium level of sponsorship for CEEC activities. Special thanks to both Agnico Eagle and Weir who are the first of our premium sponsors.



Our vision is centred around knowledge sharing, collaboration, and advocacy. The CEECing Change podcast has been a big part of that and we do hope you have found it useful and informative. We've released six episodes of the podcast this year and have a plan for more high-quality content throughout 2024.

Of course, a highlight of our year was the awarding of the CEEC Medal in August. Congratulations to the authors of the operations paper, on coarse particle flotation in a copper concentrator, and to the authors of the technical research paper, on the behaviour of microwave heating of ores.

We're very excited also to continue work on our Global Water Initiative in earnest – with the first sponsors on board (thanks again to Agnico Eagle and Weir). This is a very important project and ensures we can play our part in the ongoing development of sustainable mining practices. We have a work plan in coming months so please get in touch if you are interested in being involved.

Finally, thanks go out to the CEEC Board, CEEC Executive President Janine Herzig, the operational team and all advocates, members and patrons. CEEC is very much dependent on the generosity of this team and the efforts of all involved.

A Year's Overview

EXECUTIVE PRESIDENT'S REPORT

The CEEC International leadership team underwent some significant changes over the course of 2023/2023. We welcomed four new Directors at the previous Annual General Meeting which has brought in new energy and enthusiasm, and a range of different and diverse views and experiences.

CEEC pursued a number of new initiatives and opportunities during the year as we continued to rebuild relationships and engagement with existing and new sponsors and supporters.

The most significant activity for the year was in relation to our Global Water Initiative (GWI). In the spirit of collaboration, we were delighted to welcome Agnico Eagle Mines Ltd and Weir Minerals as early adopter sponsors for the GWI. This has marked a significant milestone in our journey towards sustainable water and resource management. The initiative seeks to address critical water and tailings management issues by considering context and boundaries as well as water quality, scarcity and excess.

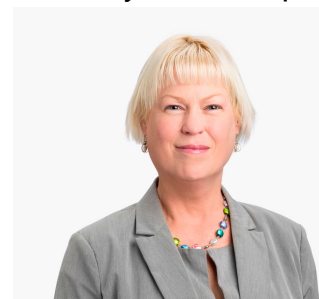
The CEECing Change Podcast has been reinvigorated, attracting new audiences who are eager to engage with thought-provoking discussions on minerals efficiency. The success of this platform and the diversity of topics covered underscores our commitment to knowledge sharing and collaboration within our community.

As we look ahead to the upcoming year, we anticipate a surge in activity for the Global Water Initiative. Collaborations with industry and OEM partners and sponsors, along with the engagement of Tri Helix to professionally facilitate interactive sessions, will enrich the sectors' collective understanding of water and tailings management. Moreover, we have an exciting in-person workshop scheduled for February 2024 in North America, offering a valuable opportunity for face-to-face engagement and the exchange of ideas.

A noteworthy highlight of the past year was the awarding of the 2022 CEEC Medals in Technical Research and Operations, which recognise outstanding contributions to the resources sector focusing on energy, water and tailings efficiency. We eagerly await applications for the 2023 CEEC Medal, anticipating an even broader array of inspiring initiatives that will drive the sector forward.

We remain steadfast in our commitment to offer a comprehensive resource centre through the CEEC website. This serves as a hub for valuable information, fostering collaboration and knowledge sharing on topics vital to our industry. Opportunities for collaboration continue to expand, allowing our cohort to engage with critical subjects in a meaningful manner.

I extend my gratitude to our dedicated staff, contractors, consultants, Board, Advocates, Patrons, and Sponsors for their unwavering support and belief in our shared mission. Together, we are poised to embrace the evolving challenges that exist in the resource sector, fostering sustainability, efficiency, and responsible practices.



OUR SPONSORS

Premium



General



Metso



Supporters



We extend our gratitude to both our loyal, long-time sponsors and the new supporters who have joined us this year. Your unwavering commitment to our cause significantly propels CEEC's Mission and Vision forward.

CEEC'S NETWORK



CEEC International's not-for-profit endeavours are made achievable through the consistent backing of our sponsors, volunteers, and in-kind supporters. Each year, their generous contributions and commitment to our shared vision empower CEEC to broaden our networks, bolster resources, disseminate the latest technological breakthroughs and award the esteemed CEEC Medal in Technical Research and Operations.

Collectively, we have the potential to accelerate the shift towards reduced energy consumption, reduced emissions, and optimised water use. Through collaborative knowledge sharing, we can effectively address common industry challenges, pinpoint cost-effective measures, all the while enhancing productivity and social value.

We extend sincere appreciation to our sponsors and many volunteers for their dedicated commitment to CEEC's vision and mission. Thank you for being integral contributors to our journey toward a better tomorrow.



2022 MEDAL

CEEC International proudly recognised outstanding achievements with the 2022 CEEC Medal, a prestigious award acknowledging exceptional research and field work that significantly contributes to advancing eco-efficiency in mineral processing.

For more than a decade, CEEC has been at the forefront of advocating for greater sustainability within the resources sector. Our primary focus has been to disseminate knowledge, cutting-edge technologies, and effective approaches aimed at reducing energy consumption and optimising water and tailings utilisation during mineral extraction.

The CEEC Medal received 12 high-quality submissions from researchers, operators, OEMs and suppliers worldwide. A panel of four CEEC Directors and Advocates meticulously evaluated these submissions, reflecting the diverse expertise within our organisation.

CEEC extends congratulations to each recipient of the CEEC Medal. Their outstanding contributions hold immense potential for minimising environmental footprints and realising value, not only within their specific operations but across the entire industry.

Now in its 11th year, the CEEC Medal owes its success to the steadfast support of CEEC's industry sponsors, whose contributions financially support the organisation's efforts to accelerate more eco-efficient mineral processing practices.

A special expression of gratitude goes out to our esteemed sponsors and all individuals who nominated candidates for the CEEC Medal. The abstracts from these remarkable papers can be accessed on the CEEC website, alongside other freely available resources with widespread adoption of eco-efficient practices within the sector.

We are pleased to announce that nominations for the 2023 CEEC Medal are currently open and will remain so until January 31, 2024. Detailed information regarding the application process for the 2023 CEEC Medal can be found [here](#), encouraging interested individuals to participate and contribute to our ongoing mission of advancing sustainability and eco-efficiency within the mineral processing sector.



TECHNICAL RESEARCH

"Microwave Heating Behaviour of Ores and its Application to High-Power Microwave Assisted Comminution and Ore Sorting"

Authors: John Forster, Adam Olmsted, Xinyi (Wendy) Tian, Darryel Boucher, Matthew Goldbaum, Chris Pickles, and Erin Bobicki

Affiliations: University of Toronto, Queen's University, Sepro Mineral Systems Corp, University of Alberta

OPERATIONS

"Commissioning a HydroFloat® in a Copper Concentrator Application"

Authors: Karina Arburo, Jaime Zuniga, Adrian McDonald, Felipe Valdes, Jose Concha, and Eric Wasmund

Affiliations: Anglo American and Eriez Flotation



High Commendations

Technical Research

"Helping to Reduce Mining Industry Carbon Emissions: A Step-by-Step Guide to Sizing and Selection of Energy Efficient High Pressure Grinding Rolls Circuits"

Author: Stephen Morrell

Affiliation: SMC Testing Pty Ltd

Operations

"Pumping Sustainably — Power and Water Consumption in Mineral Processing Plants. Someone Should Care."

Authors: Alan Varghese, Sudarshan Martins, Evert Lessing, Ghulam Mubashar Hassan, Ali Karrech

Affiliations: Metso, University of Western Australia

CEECING CHANGE PODCAST

The CEECing Change Podcast experienced significant success over the past 12 months, providing a platform for in-depth discussions between individuals who are passionate about sustainability and eco-efficiency within the resources sector.

Every episode showcases engaging interviews with prominent figures across the resources sector who are committed to driving best practice in energy efficiency, water management and reduction in tailings. These conversations delve into critical topics such as innovation, tailings management, preconcentration, comminution, flotation, sustainability, and, notably, water management.

Episode 1 – Welcome to 2023

In January, we sat down with CEEC International's Chair, Marc Allen and Executive President, Janine Herzig to discuss recent changes at CEEC, acknowledge generous contributions, and look forward to an exciting year ahead.

Episode 2 – Global Water Initiative

In this episode we were joined by CEEC International Director Philip Bangerter and CEEC Advocate and Principal Consultant at Resourceful Paths, Laurie Reemeyer, as they discuss an exciting new project being launched and led by CEEC International - the Global Water Initiative. You can follow the progress of the GWI and get involved via the [website](#).

Episode 3 – Anglo American Hydraulic Dewatered Stack (HDS) Technology

In this episode CEEC International Director Eric Wasmund sat down with the Head of Innovation from Anglo American, Phil Newman to discuss the benefits of the Anglo American Hydraulic Dewatered Stack (HDS) technology. This was a lively and dynamic conversation and to find out more about the technology, visit the [Anglo American website](#).



Episode 4 – Ausenco Tailings Management

In September's episode we were joined by CEEC International Director Joe Pease, and Director of Technical Solutions from Ausenco, Matt Pyle as we discuss his recent paper "Improving Tailings Outcomes with Next Generation Concentrators".

Episode 5 – Angelica Amanda Andrade: The Impact of Tailings Failures

In September CEEC International Executive President & Director, Janine Herzig had a conversation with Master of Philosophy Candidate at the Sustainable Minerals Institute, Centre for Social Responsibility in Mining, Angelica Amanda Andrade, to discuss her studies and the social impact of tailings failures.

Episode 6 – Technical Research Medal

In October we released an episode featuring CEEC International Director Grant Ballantyne, and Technical Lead from Sepro Systems, John Forster as we discuss their recent paper "Microwave Heating Behaviour of Ores and its Application to High-Power Microwave Assisted Comminution and Ore Sorting" which received the 2022 CEEC Medal for Technical Research.

Episode 7 – Operations Medal

This episode will feature CEEC International Director Grant Ballantyne, and Principal Process Development from Anglo American, Karina Arburo as they discuss their recent paper "Commissioning a HydroFloat® in a Copper Concentrator Application" which received the 2022 CEEC Medal for Operations.

GLOBAL WATER INITIATIVE

CEEC's most important initiative for 2022/2023 was marked by a number of significant milestones, most notably the financial and in-kind commitment from the first two early adopter sponsors – Agnico Eagle Mining Ltd and Weir and the official launch of the Global Water Initiative (GWI) at the MetPlant 2023 Conference on Monday, November 6, 2023 in Adelaide, Australia. The esteemed panel who discussed "Water – Context and Boundaries" at this event included Philip Bangerter, Laurie Reemeyer, Nadja Kunz, Ingrid Oyarzun, Neville Plint and Angelica Amanda Andrade.

We are looking forward to reaching future milestones, including two virtual workshops, professionally facilitated through Tri Helix, emphasising collaboration and knowledge sharing. Additionally, we anticipate an in-person workshop scheduled for February 2024 at the SME MineXchange conference in Phoenix, Arizona, further strengthening our collective global efforts.

Crucial to the success of the GWI is the significant support we've been able to achieve, including sponsorship from industry leaders Agnico Eagle and Weir and in-kind support from Nova Terra, Reforme Group . We are eager to work alongside our talented research partners: University of British Columbia, the Sustainable Minerals Institute, ICE-Chile, and Curtin University, collectively leveraging our expertise to drive meaningful change.



The need for change is underscored by the significance of water, a vital resource crucial for both humanity and resource extraction. Challenges such as water scarcity, disputes over water rights, the escalating frequency of extreme weather events, and groundwater contamination significantly impede minerals production and escalate costs – both financial and social.

Existing industry guidelines, exemplified by ICMM, IRMA, and UNEP, emphasise the pressing need for context-specific water solutions. While these guidelines serve as valuable starting points, a critical gap persists between data collection and reporting, and the practical implementation of water management strategies in operations.

Recognising water issues as inherently interdisciplinary, now is the opportune moment for collective collaboration. Building on the success of the CEEC Energy Curves initiative a decade ago, we acknowledged the complexities of water as a resource, leading to the inception of the GWI.



GLOBAL WATER INITIATIVE



Aligned with sustainability principles, professionals within the CEEC network see an unprecedented opportunity to bring together producers, METS, OEMS, investors and research professionals to discuss and find innovative solutions in water management. Our strategy centres on educating resource professionals, fortifying their understanding of water management in different climates and across multiple disciplines.

The initial phase of our campaign involves comprehensive road-mapping, aimed at establishing a shared understanding and identifying the gaps in existing water management systems and risk mitigation. The GWI will evolve through workshops and collaborative interactions. By arming professionals with water management knowledge and context, we will elevate industry standards and understanding and effectively meet the challenges posed by water and tailings.

Anticipating the positive legacy of the GWI, success for CEEC International would be a sector-wide shift where water management becomes a pivotal consideration in resource operations and life-of-mine planning, rather than an afterthought. This transformation foresees a future without water-related disasters, achieving alignment among investors, regulators, industry professionals, and communities.

We aspire to create an environment where responsible water use is the norm, and professionals are adept at addressing water-related challenges. By fostering a deeper and more widespread understanding of water management through open collaboration and knowledge-sharing, we envision stakeholders prioritising sustainable water practices, minimising adverse impacts, and enhancing overall ESG performance. The GWI represents a vital step towards a sustainable and responsible future for the resources sector.



Invitation to contribute We need **your** expertise

CASE FOR CHANGE

Water is vital for humanity and necessary for resource extraction. Challenges such as water scarcity, conflicts over water rights, the increasing frequency of extreme weather events and groundwater contamination, all hinder minerals production and escalate costs.

The development of industry guidelines (eg ICMA, IRMA and UNEP), highlight the need for context-specific water solutions.

These guidelines represent a starting point and provide valuable insight, yet a gap remains between the data collected and reported, and practical water management in operations.

Water issues are inter-disciplinary and the time for collaboration is NOW!

The CEEC Energy Curves Initiative from a decade ago was successful and widely adopted by industry. Attempts by CEEC to replicate "curves" for water management revealed the complexities of water as a resource, prompting the birth of the **Global Water Initiative (GWI)**.

Dedicated to sustainability, CEEC aligned professionals see an opportunity to convene producers, METS and research professionals on the topic of water. Our strategy is based on educating resources professionals to **strengthen water management knowledge across disciplines.**

The initial road-mapping campaign is intended to guide our efforts to build shared understanding and identify gaps and needs in water management and risk mitigation.

The GWI will evolve through **workshops and other collaborative interactions.** By equipping professionals with deeper water management knowledge, we aim to **raise industry standards** and meet the challenges posed by water and tailings.

What will the GWI legacy mean?

- Water management will be a pivotal consideration in resource operations and life-of-mine planning instead of an after-thought
- A future without water-related disasters
- Alignment of investors, regulators, industry professionals and communities
- An environment where responsible water use is the norm

- Professionals will be more effective at solving water-related challenges
- Greater and more widespread understanding of water management with open collaboration and knowledge sharing
- All stakeholders recognising and prioritising sustainable water practices, minimising negative impacts and improving overall ESG performance

We invite you to join us in this initiative.

- Dates and format subject to change.



1 WEEK CAMPAIGN TIMELINE

4 focused, short & sharp sessions facilitated virtually on Miro as a group

SESSION 1

6 November 2023
ADELAIDE PANEL AT METPLANT CONFERENCE, ADELAIDE CONVENTION CENTRE
Duration: 1hr

SESSION 2

Early December 2023

VIRTUAL SESSION VIA MRO
Duration: 2hrs

SESSION 3*

Late January 2024

VIRTUAL SESSION VIA MRO
Duration: 2hrs

SESSION 4*

SME Conference (25-28 February 2024, Phoenix USA)

ROUND MAPPING WORKSHOP
Duration: 4hrs

CONTACT

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2022/2023

STATUTORY FINANCE REPORTS

CEEC International Ltd Income Statement For the year ended 30 June 2023

	<u>Jul 22 - Jun 23</u>	<u>Jul 21 - Jun 22</u>
Ordinary Income/Expense		
Income		
Sponsorship	443,178.10	242,698.36
Total Income	443,178.10	242,698.36
Expense		
Offset Account	20.00	-0.06
Co sec salary	53,177.80	0.00
Legal Fees	10,600.00	0.00
Exec Assit Salary	66,470.27	10,679.00
Contractor - Exec Pres	49,805.71	0.00
Audit and Accounting	9,549.09	8,853.00
Bank Fees	175.00	167.00
CEEC Medal	626.68	1,343.09
CEEC Newsletters	1,560.00	840.00
Computer Expenses	0.00	2,305.59
Conference collateral	0.00	1,407.93
Conferences & Seminars	3,080.00	272.73
Contractor - IT & Cyber	2,988.50	0.00
Contractor - Marketing & Design	0.00	950.00
Contractor - Project Director	17,222.73	20,160.64
Contractor - Pub Comms	28,955.09	41,031.10
Digital Backups Cyber Security	65.96	395.76
CEO Salary	56.15	70,800.45
Events Comms Salary	2,906.18	34,203.51
Exchange Gain/Loss	1,533.95	-1,158.62
Freight and Delivery	172.73	0.00
GST Rounding Account	0.05	-0.27
Insurance - Cyber Protection	1,679.82	872.73
Insurance - Directors	3,770.72	7,755.06
Insurance - Public Liability	411.59	640.80
Marketing	2,380.87	521.00
Meetings	0.00	108.50
Office Supplies	1,575.73	152.37
Online Events Webinars	374.96	397.39
Payroll Super	12,868.44	11,485.16
Postage, Delivery, Freight	839.86	256.75
Software Expense	3,664.06	5,151.20
Telephone	938.98	1,202.52
Payroll - JobKeeper	0.00	0.00
Training and Development	143.55	0.00
Travel & Ent	6,165.31	0.00
Video content Podcasts YouTube	5,585.45	0.00
Webinars Marketing	0.00	9,255.00
Website Development, hosting	2,927.50	385.00
Workcover Insurance	-521.52	1,776.97
Total Expense	291,771.21	232,211.30
Net Ordinary Income	151,406.89	10,487.06
Other Income/Expense		
Other Income		
JobKeeper Subsidy	0.00	3,900.00
Interest earned	1,674.21	46.24
Total Other Income	1,674.21	3,946.24
Net Other Income	1,674.21	3,946.24
Net Income	<u>153,081.10</u>	<u>14,433.30</u>



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