

SUMMARY SLIDE DECK

SALT FORUM 2023

Strand Hotel Swakopmund, Namibia
6-9 November 2023



The new conference for global salt supply and markets



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EUROPEAN SALT PRODUCERS ASSOCIATION



PROJECT BLUE

Salt Market Information
Independent, in-depth market analytics



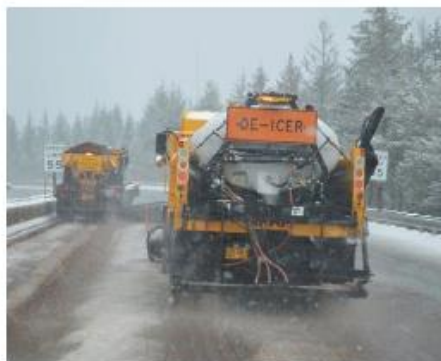
Salt Partners
Turning salt into gold

SALT FORUM 2024

Intercontinental Hotel Abu Dhabi
18-20 November 2024



The new conference for global salt production and markets



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Salt Partners
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CONFIRMED SPEAKERS

European sea salt production & markets

Gonzalo Diaz Caicoya, President, SEASALT Europe, Spain

Solar salt works & technology developments on increasing salt yield & quality with sustainability

Dr Bhoomi Andharia, Senior Scientist, Salt and Marine Chemicals Division, CSIR-CSMCRI, India

Advancements in solar salt industry: a comprehensive exploration of automation for enhanced efficiency and sustainability

Param H Dave, Manager, Tata Chemicals Ltd, India

The California Supreme Salt project

Vladimir Sedivy, President, Salt Partners Ltd, Switzerland

Salt global supply overview & market outlook

Dr Stefan Schlag, Managing Director, Salt Market Information, Switzerland
Topics to include

Status of Pakistan salt supply, markets & future prospects

Ismail Suttar, Chief Executive Officer, HubSalt, Pakistan

The potential of sodium-ion batteries & salt requirements

Sean Hoffman, Critical Minerals Research Analyst, Project Blue, South Africa

Crystallizer pilot study to produce high-purity NaCl salt from monovalent-ion dominant concentrated desalination brine

Dr Christopher Fellows, Researcher, Saline Water Conversion Corp., Saudi Arabia

Topics to include

- | | |
|-----------------------------|---------------------------|
| ● Resources & New Sources | Trends |
| ● Exploration & Development | ● Market Demand |
| ● Production Technology | ● Processing Developments |
| ● Regional Supply | ● Logistics |
| | ● New applications |



Welcome to Namibia & Swakopmund!



Welcome Reception Monday Night



SALT FORUM 2023

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6-9 November 2023



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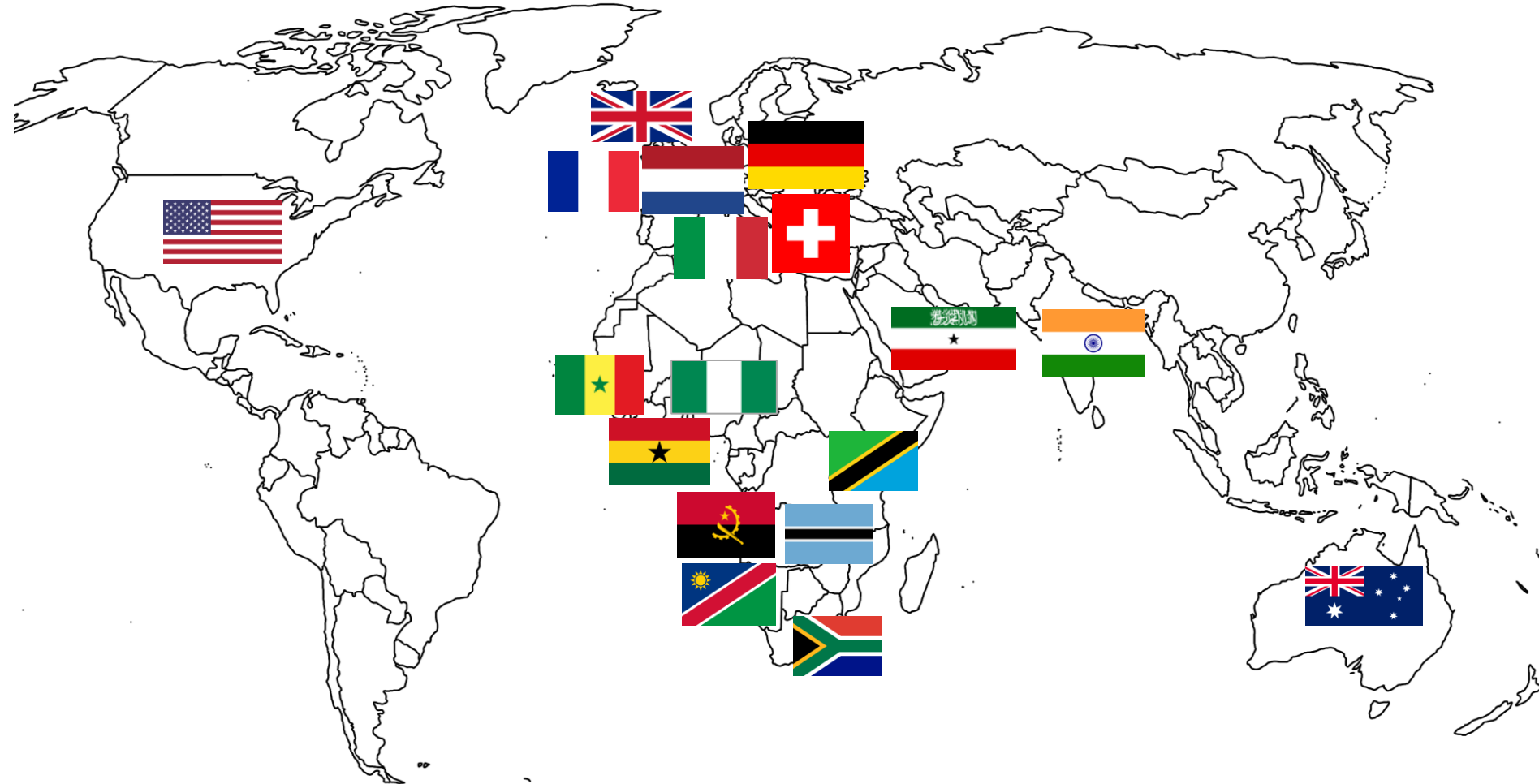


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SOSALT SpA
Sun Salt (PTY) Ltd
TEMA Process BV
The Chamber of Mines of Namibia
Walvis Bay Salt
Wirtgen Group

A valuable addition to producers like us to meet global salt partners; a professionally organised event

Surendra Singe Ahlawat, Chief Manager Operations, Chowgule & Co. (Salt) Pvt Ltd, India

Good focus highlighting various opportunities and hurdles; as expected, excellent organisation

Alastair John, Category Manager, SLB, USA

Excellent programme and venue, covered the relevant topics with interesting insights

Moistehpi Serato, Sales & Marketing Manager, Botswana Ash (Pty) Ltd, Botswana

Very informative, interactive and eye opening, and opportunity to learn, well planned and co-ordinated

Ramsaran Lekshisanan, General Manager, Nyanza Mines (Tangayika) Ltd, Tanzania

A lot of producers and experts to learn from and good interaction opportunities

Gorrite du Plessis, Multotec, South Africa

Well structured, interesting assortment of speakers, amazing venue.

Sean Hoffmann, Project Blue, South Africa

Excellent all round; a very international programme and relevant discussions, punctual and effectively moderated

Olavi Hangula, Relationship Manager, RMB Corporate & Investment Bank, Namibia

Very informative and I have learned a lot, great choice of venue, excellent organisation

Chris Strange, General Manager, Marina Sea Salt, South Africa

Good programme, very informative, excellent venue and well co-ordinated

Veston Malango, CEO, The Chamber of Mines, Namibia

Well balanced programme and informative, great venue and smooth operation

Heinrich Schulenburg, Wirtgen Group, South Africa



SALT FORUM 2023

Strand Hotel Swakopmund, Namibia
6-9 November 2023



The new conference for global salt supply and markets

Why Salt Forum? Why now? Why INFORMED?

- The salt market deserves a regular, well-organised conference, providing an international networking and knowledge sharing hub
- In light of the demise of the *World Salt Symposium*, and more recently, Roskill's *Salt Conference*...
- ...INFORMED has stepped up to fulfil this requirement with **Salt Forum** (Salt Forum 2022 Hamburg)
- **INFORMED** has proven track record of organising successful conferences for specific sectors of the industrial minerals business (as highlighted earlier)

Programmed with Intelligence | Moderated by Experts



TUESDAY 7 NOVEMBER

INTRODUCTION | SOUTHERN AFRICA

- 09:00 **Opening Remarks & Introduction**
Ismene Clarke, Director & Mike O'Driscoll, Director, INFORMED, UK
- 09:30 **Welcome Address**
Veston Malango, CEO, The Chamber of Mines of Namibia, Namibia
- 09:45 **Southern Africa & Walvis Bay Salt development & production**
Andre Snyman, MD, Walvis Bay Salt, Namibia
- 10:15 **Conceptional salt products: Salicornia**
Hennie Roets, Independent Consultant, Namibia

10:30 COFFEE

MARKET OVERVIEWS: SALT | BULK FREIGHT

- 11:15 **Salt market overview: trends & outlook**
Stefan Schlag, Managing Director, Salt Market Information, Switzerland
- 11:45 **Global bulk freight market overview**
Simon Lester, Managing Director, Dry Cargo, Clarksons South Africa (Pty) Ltd, South Africa
- 12:15 **Is salt a potential Critical Raw Material?**
Jack Bedder, Founder & Director, Project Blue, South Africa

12:45 LUNCH



TUESDAY 7 NOVEMBER

EUROPE | SENEGAL | SOLAR SALT

- 14:00 **The European salt market & role of EUsalt**
Dr Urs Ch. Hofmeier, President, EUsalt & CEO, Schweizer Salinen AG,
Switzerland
- 14:30 **Senegal salt project progress**
Mahecor Diouf, Managing Director, Domeco & Fatick Industrial Zone
(FIZ), Senegal
- 15:00 **Production technology for best quality solar sea salt for the
chloralkali industry**
Vladimir Sedivy, President, Salt Partners Ltd, Switzerland

15:30 COFFEE

16:00 CLOSE OF DAY 1

PROGRAMME

WEDNESDAY 8 NOVEMBER

APAC | AUSTRALIA | INDIA

09:00 **Welcome Address**

Bryan Eiseb, Executive Director, Ministry of Mines and Energy, Namibia

09:15 **APAC salt market supply & demand**

Alison Saxby, Research Director, Project Blue, UK

09:45 **Mardie Salt & Potash Project: status & outlook**

David Boshoff, Managing Director, BCI Minerals Ltd, Australia

10:15 **India's salt industry & role of CSMCRI in improving quality & yield of solar salt through technological interventions**

Dr Arvind Kumar, Chief Scientist, Central Salt & Marine Chemicals Research Institute, India

Pre-recorded
PowerPoint video
presentation

10:45 COFFEE

PROCESSING DEVELOPMENTS

11:45 **More quality in salt harvesting by using high-performance cold milling machines**

Bernd Holl, Product Manager – Cold Milling Machines, Wirtgen Group, South Africa

12:15 **Efficient salt drying**

Mark Kragting, Sales & Process Manager, TEMA Process BV, Netherlands

12:45 LUNCH & END OF CONFERENCE



WEDNESDAY 8 NOVEMBER

MOONSCAPE DESERT DINNER

Sponsored by



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WIRTGEN GROUP



- 18:00 **Departure from Strand Hotel Swakopmund**
- 18:45 **Sundowner at Lookout Point**
- 19:45 **Arrival at Moon Landscape Desert Dinner venue**
- 22:00 **First bus departs to return to Hotel**
- 23:30 **Last bus departs to return to Hotel**
- 01:00 **Estimated last bus arrival back at Hotel**

PLEASE NOTE: appropriate footwear & clothing for a desert evening event – a drop in temperature may require a jacket or pullover.



PROGRAMME

THURSDAY 9 NOVEMBER

FIELD TRIP: Walvis Bay Salt



- 07:45 **Meet lobby Strand Hotel Swakopmund**
- 08:00 **Bus departs hotel for Walvis Bay**
- 09:00 **Arrive Walvis Bay Salt; start of tour**
- 11:00 **Refreshments at Walvis Bay Salt office**
- 11:15 **Bus shuttles leave, incl. for Walvis Bay Airport**

PLEASE NOTE: appropriate footwear & clothing that befits an industrial site visit; hat, sunscreen and sun glasses advisable.



The world of salt supply & demand



- 300m tonnes produced worldwide
- 50m tonnes exported by >50 countries
- For most applications, no economic substitutes or alternatives.
- Deicing, certain chemical processes, food flavouring: calcium chloride, calcium magnesium acetate, hydrochloric acid, & potassium chloride can be substituted for salt, *but at higher cost.*

Diversity of salt production

Rock salt

Conventional mining



18%*

Sea/solar salt

Crystallisation of sea water



47%*

Evaporated salt

Recrystallization of purified brine



12%*

Brine

Controlled solution mining

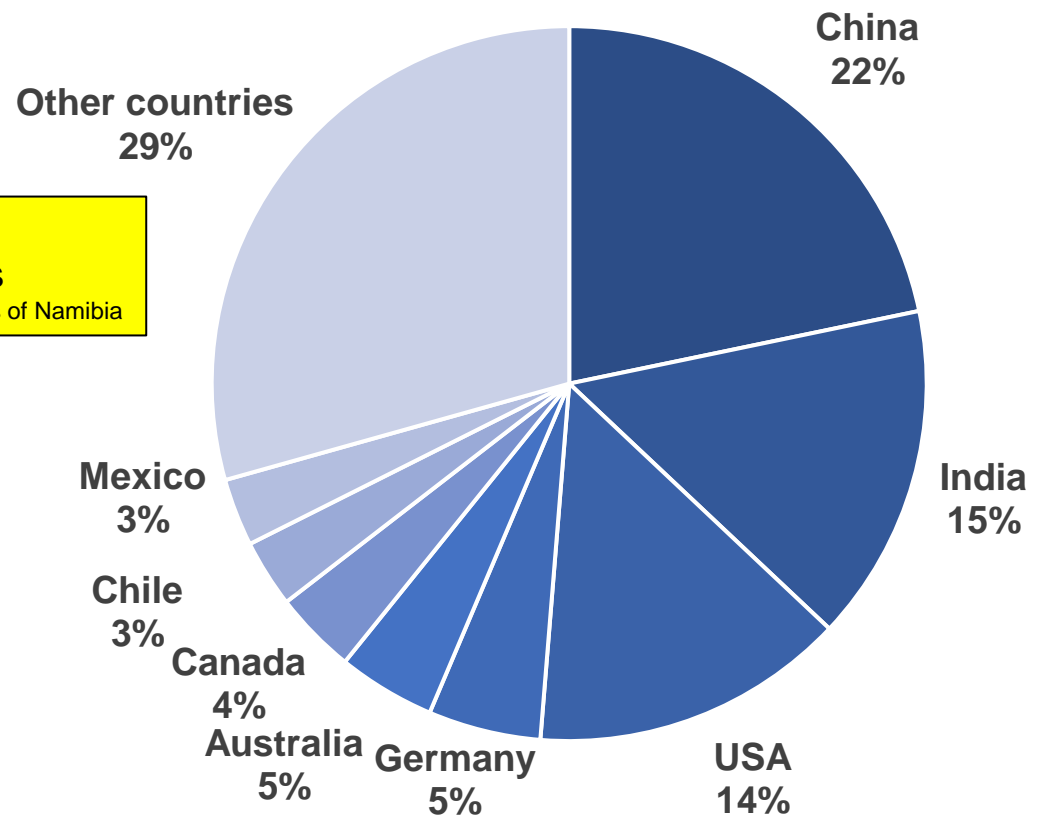


23%*

* Salt Market Information 2023

World salt production

Estimates | 000s tonnes

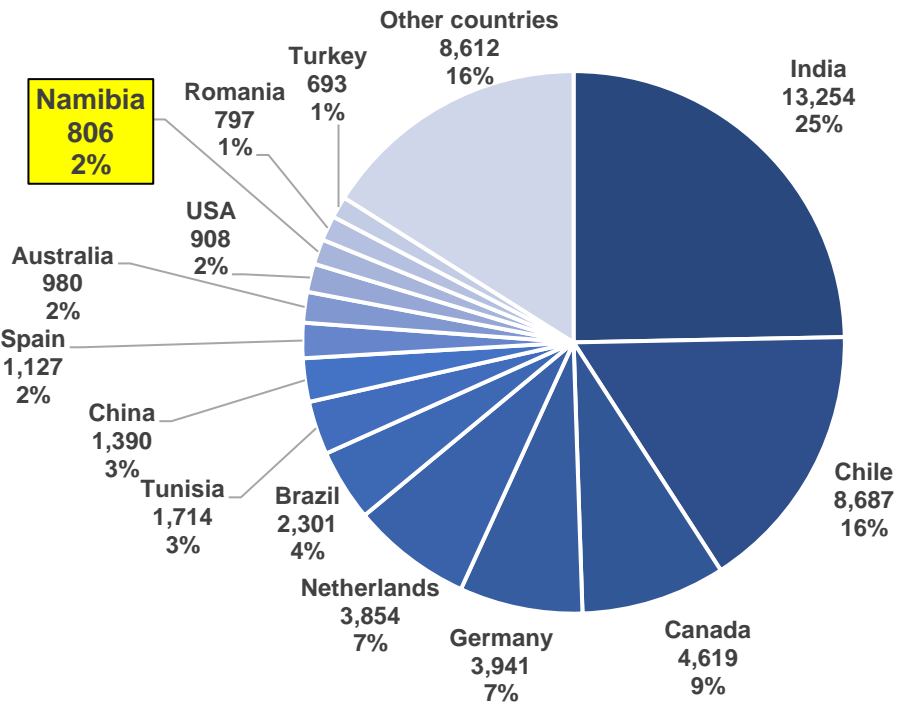


Namibia 2022
1,022,448 tonnes
Source: Chamber of Mines of Namibia

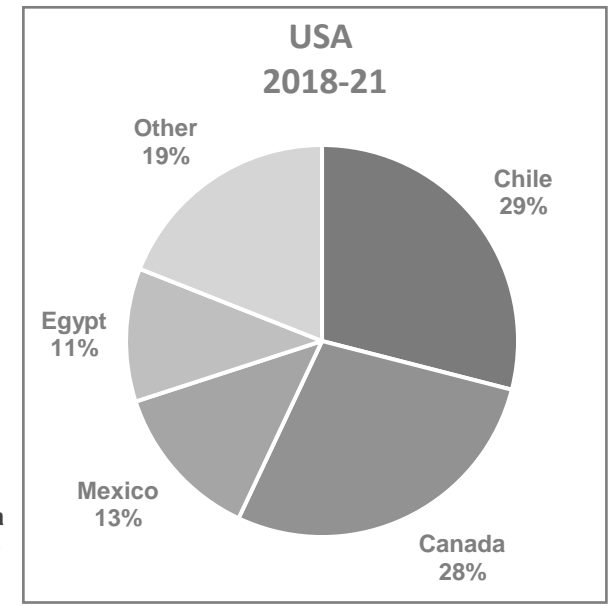
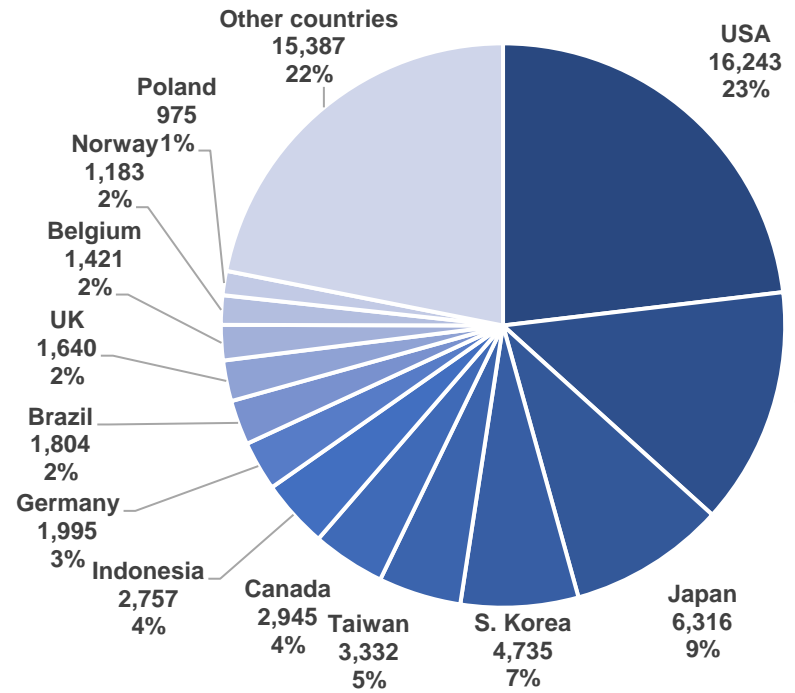
Country	2021	2022	+/-
China	64,000	64,000	
India	45,000	45,000	
USA	42,000	42,000	
Germany	15,000	15,000	
Australia	12,200	13,000	↑
Canada	11,800	11,000	↓
Chile	8,570	9,000	↑
Mexico	9,000	9,000	
Brazil	7,400	7,400	
Turkey	6,900	6,900	
Netherlands	6,120	6,200	↑
Russia	6,500	6,000	↓
France	5,400	5,500	↑
Spain	4,200	4,200	
Poland	4,000	4,000	
Pakistan	3,000	3,300	↑
UK	2,400	2,800	↑
Iran	2,700	2,700	
Saudi Arabia	2,330	2,400	↑
Italy	1,900	2,000	↑
Ukraine	1,800	1,000	↓
Other countries	31,000	32,000	↑
World total (rounded)	294,000	290,000	

World salt trade 2022

Exports
Total 53.7m. tonnes
(000s tonnes)



Imports
Total 70.3m tonnes
(000s tonnes)



Source: ICT; USGS

Salt market challenges & opportunities

Key topics & questions of interest

- Future of salt in Africa
- Rising salt demand, especially in Asia
- Megatrends - ageing population - growing population – energy costs/transition
- Impact of climate change on salt production
 - Decarbonisation in the industry: carbon footprints between solar salt, rock salt and vacuum salt
 - Potential of sodium ion solid state batteries (NaCl + Ni cathode) in the future of energy transition?
- New projects: Australia, Canada, Spain, Saudi Arabia, Pakistan; which will come to fruition and when? how long will it take to absorb these volumes? What will be the impact on prices?
- State of salt replacement? Urgency? How dangerous is salt for health? Are companies still developing salt replacement?
- Chlor-alkali market outlook: Tecnon OrbiChem forecasts 2023-2030 increase of 20m tonnes caustic soda (= 35m tonnes additional salt demand)
- Changing corporate landscape: eg. Cargill exiting salt business; Dampier selling Lake McLeod, WA





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- **Launched in January 2015**
- **Extensive experience & reputation**
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 - **Refractory Minerals**
 - **China**
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 - **Fluorine**
 - **India**
 - **Barite & Oilfield Minerals**
 - **Salt**



BARITE & OILFIELD MINERALS FORUM 2024

5-7 June 2024



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Supply & demand trends for barite & minerals in oilfield applications

FLUORINE FORUM 2024

Shangri-La Ulaanbaatar
14-16 October 2024



The premier meeting for the global fluorine minerals & markets business



FIELD TRIP: MONGOLCZECHEMETALL THURSDAY 17 OCTOBER 2024

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Field Trip Host



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CONFIRMED SPEAKERS

Benchmark Breakfast Briefing: Fluorine in the Battery & EV age

Jessica Roberts, Head of Forecasting, Benchmark Mineral Intelligence, UK

Fluorspar supply & demand overview

Maximilian Court, Product Director – Battery Chemicals, Benchmark Mineral Intelligence, UK

Mongolian fluorite deposits

Dr Tumenbayar Baatar, Director, SFP, Mongolia

China fluorspar supply review

Xinhua Liao, President, Fujian Haojingda Industry Co., Ltd, China

Lost Sheep Fluorspar Project, Delta, Utah: Progress & Outlook

James Walker, CEO, Ares Strategic Mining, Canada

Tivan Ltd: Introducing the Speewah Fluorite Project

Grant Wilson, Executive Chair, Tivan Ltd, Australia

Hydrofluoric Acid: Asian Supply and Demand outlook

Samantha Wietlisbach, Director Minerals Research and Analysis, S&P Global, Switzerland

Challenges & opportunities faced by Western fluorspar miners

Peter Robinson, Managing Direct, Fluorspar Ventures, UK

Production of aluminium fluoride from fluorosilicic acid

Dr Alexey Morozkov, JSC "NIUIF", PhosAgro, Russia

CHINA REFRACTORY MINERALS FORUM 2024



InterContinental Dalian, 21-23 October 2024

Field trip to Haicheng Magnesite, Thursday 24 October 2024

The latest trends and developments in China's refractory minerals supply, processing, logistics, and market demand



FIELD TRIP: HAIMAG, HAICHENG THURSDAY 24 OCTOBER 2024

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CONFIRMED SPEAKERS

Exploring refractory raw material procurement from China: potential & challenges

Devang Chowdhary, Director, Thyme Corp., Germany

Refractories without China?

Dr Richard Flook, Managing Director, Mosman Resources, Australia

China's refractories industry: status, key challenges, influencing factors, & demand outlook

Dr Wang Zhanmin, VP Manufacturing, Sinosteel Luonai Materials Technology Co. Ltd, China

Evolving performance needs for alumina raw materials in China's refractories market

Chris Parr, VP Science & Technology, Imerys Refractories, Abrasives, Construction, France

Review & outlook for downstream refractory markets

Dr Adam Gao, Associate Director, Inorganics & Mining Materials, S&P Global Commodity Insights, China

Developments in producing high grade refractory magnesia in China

Prof. Zongqi Guo, Xi'an University of Architecture and Technology - School of Material Science & Engineering, China

Trends & developments in China's refractories market

RHI Magnesita, China



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- | | |
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| | ● New applications |

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FOR WHICH
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- Leading industrial minerals
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- Key specified chemical component
- World production
- Main source countries
- Leading consuming markets

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MINERALS ¹	MARKETS ²										PRIMARY RAW MATERIAL PRODUCTION ³	BY SPECIFIC COUNTRY/CONTINENT ⁴	WORLD PRODUCTION ⁵	MAIN SOURCE COUNTRY ⁶		
	Abrasives	Absorbents	Agrimarkets	Batteries	Cement	Ceramics	Chemicals	Construction	Cosmetics	De						
ALUMINA*	●			○	●	●	●			○	●	●	●	●	●	●
ALUMINA FUSED**	●					●	●									
ANDALUSITE	○					●	●									
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BAUXITE	●						●									

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