



# The Soda Ash Industry in 2033

*- a vision for the future*

World Soda Ash Conference – Athens, October 2023

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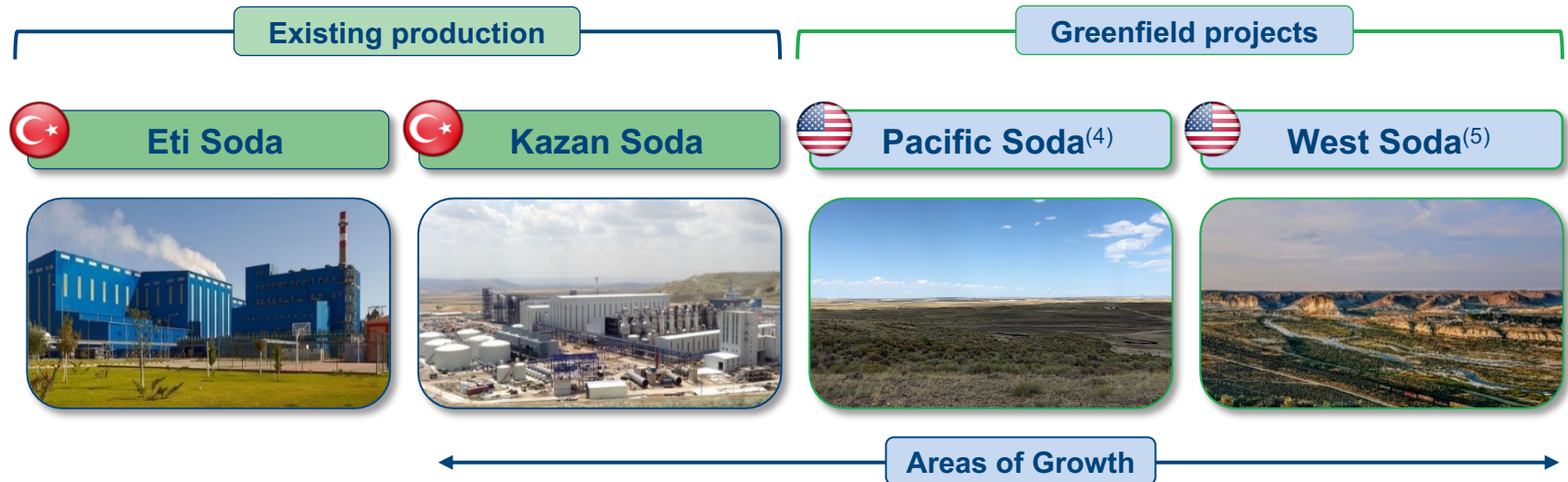
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# WE Soda: The world's largest natural soda ash producer

**We are planning to more than double our production to more than 11 million mtpa by 2030**



<b>WE Soda ownership</b>	<b>74%<sup>(1)</sup></b> (Eti Maden 26%)	<b>100%</b>	<b>40%<sup>(3)</sup></b> (Sisecam 60%)	<b>100%</b>
<b>Start of production</b>	<b>2009</b>	<b>2017</b>	<b>During 2027<sup>(4)</sup></b>	<b>Before 2030</b>
<b>Current production<sup>(2)</sup></b>	<b>2.0 m mtpa</b> (1.8 soda ash, 0.2 bicarb)	<b>3.2 m mtpa</b> (3.0 soda ash, 0.2 bicarb)	-	-
<b>Production process</b>	<b>Solution-extraction, monohydrate process</b>			
<b>Expansion potential</b>	<b>Fully expanded</b>	<b>+800 k mtpa</b> (by end 2025)	<b>Up to 5.4 m mtpa<sup>(4)</sup></b> (up to 5.0 soda ash, up to 0.4 bicarb)	<b>~2.5 - 3.0 m mtpa<sup>(5)</sup></b> (initially)
<b>Customer focus</b>	<b>80% export focused</b>			

Source: WE Soda. Notes: (1) Turkish state-owned enterprise Eti Maden has a 26% non-controlling interest in Eti Soda. (2) Based on combined (soda ash & sodium bicarbonate) production capacity as of 30 June 2023. (3) WE Soda owns a 40% interest and Sisecam owns a controlling 60% interest; if developed, WE Soda will be responsible for the sales and marketing of its 40% share of total production. (4) Pacific Soda is an early-stage development project, currently in preliminary engineering design, R&D and permitting phase. Sisecam is the 60% owner and operator, responsible for overall project execution and cost engineering, which are still ongoing, and development plans, capital cost and timing are subject to substantial revision and material change. (5) Pacific Soda is still subject to final federal and state approvals for environmental, construction and other permits. Permits and approvals required to start construction are not expected until late 2024 at the earliest. (6) West Soda is a very early-stage project owned 100% by WE Soda, as announced by WE Soda on 12 October 2022. The above consist of preliminary estimates. There can be no assurance that we will be able to develop West Soda as planned and on a timely basis, if at all.



# Our planet in 2033: Some (disturbing) predictions

The global climate challenge will get (a lot) worse, before it gets better

In the next 10 years ...	The consequences ...
<ul style="list-style-type: none"> <li>○ <b>Climate change will still be accelerating</b> – despite over two decades of reducing GHG emissions</li> <li>○ <b>Extreme weather events will be the norm</b> - not the exception</li> <li>○ <b>“Climate refugees”</b> will be a looming global crisis</li> <li>○ <b>Access to resources, particularly water,</b> will be as critical as carbon emissions</li> </ul>	<ul style="list-style-type: none"> <li>○ Emission (and water use) <b>reduction targets will accelerate</b> - particularly in Europe, but Americas and Asia will follow</li> <li>○ The <b>energy transition will have to accelerate</b> globally</li> <li>○ 2050 <b>“net zero” targets</b> will be brought forward</li> <li>○ <b>Hard environmental commitments</b> from the largest global economies (US and China)</li> <li>○ Our children (and grandchildren) will focus on <b>“sustainability” value more than economic value</b></li> </ul>

# Sustainability: The key driver of change in our industry

**Sustainability is the biggest challenge (and the biggest opportunity) ever faced by OUR industry**

The impact of Sustainability	The consequences by 2033 ...
<ul style="list-style-type: none"> <li>○ <b>Constrained supply</b> – particularly synthetic due to environmental legislation, especially in Europe and China</li> <li>○ <b>Increased demand</b> – particularly from high “value in use” applications critical to the energy transition</li> <li>○ <b>Tightening regulation and consumer requirements</b> for transparent sustainability disclosure</li> <li>○ <b>Significant investment required</b> to develop new production methods (Solvay electrochemistry), changing fuel mix (synthetic) and growth projects (natural)</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>No significant new synthetic capacity</b> additions (other than in India)</li> <li>○ <b>Tightening supply-demand</b> balances</li> <li>○ <b>Increased sustainability transparency</b>, accountability and assurance</li> <li>○ <b>Increasing price differentiation</b> between low carbon and high carbon products</li> <li>○ The need to generate an <b>economic return on invested “sustainability capital”</b></li> </ul>

# Soda Ash Demand & Supply: Tightening

Sustainability will accelerate demand and constrain supply

## In the next 10 years ...

- **85-90 million mtpa of global demand** – an increase of >20-25 million mtpa from today
  - **Mainly driven by the emerging markets** – mainly Asia (incl China) and South America
  - **>75% driven by sustainable applications** – mainly batteries, PV solar and other flat glass
- **>20 million mtpa of new capacity needed** – additional projects will be required



## The consequences ...

- **>2 million mtpa** of new soda ash supply capacity required each year
- **>90% of new supply** will come **from natural** soda ash (trona based)
- After 2030, **almost all new supply** will come **from Wyoming** (>90% global trona reserves)
- **China** likely to become a **consistent net importer**
- The potential for **supply shortages increase, driving price volatility**
- **Reliability of supply** will become increasingly important

# Market structure: Evolution, not revolution

Supply-side market structure and shape of cost curve unlikely to change  
**BUT**, transparent and reliable spot markets are likely to develop

## In the next 10 years ...

- **Most synthetic plants will still operate** – albeit with changing fuel mix
- **The cost of most synthetic production will increase** (driven by sustainability-related costs)
- **Natural soda ash will dominate the sustainability agenda**
- **Access to resource (trona) will drive the supply side**
- **Customers will demand security of supply at the best price** – with dynamic adjustment, reflecting “market” prices



## The consequences ...

- **Synthetic** production will still be **~60% of global supply**
- **Synthetic will still set the reference price** in the market – directly or indirectly
- **Natural soda ash** will command a “**sustainability premium**”
- The potential for **supply shortage**, driving **price volatility**
- **Reliability of supply** will become increasingly important for consumers
- **Long-term supply frameworks** will develop – with guaranteed volumes and a mix of contract and spot pricing
- **Transparent, exchange traded spot and derivative markets** in soda ash will develop (like other commodities – allowing hedging)

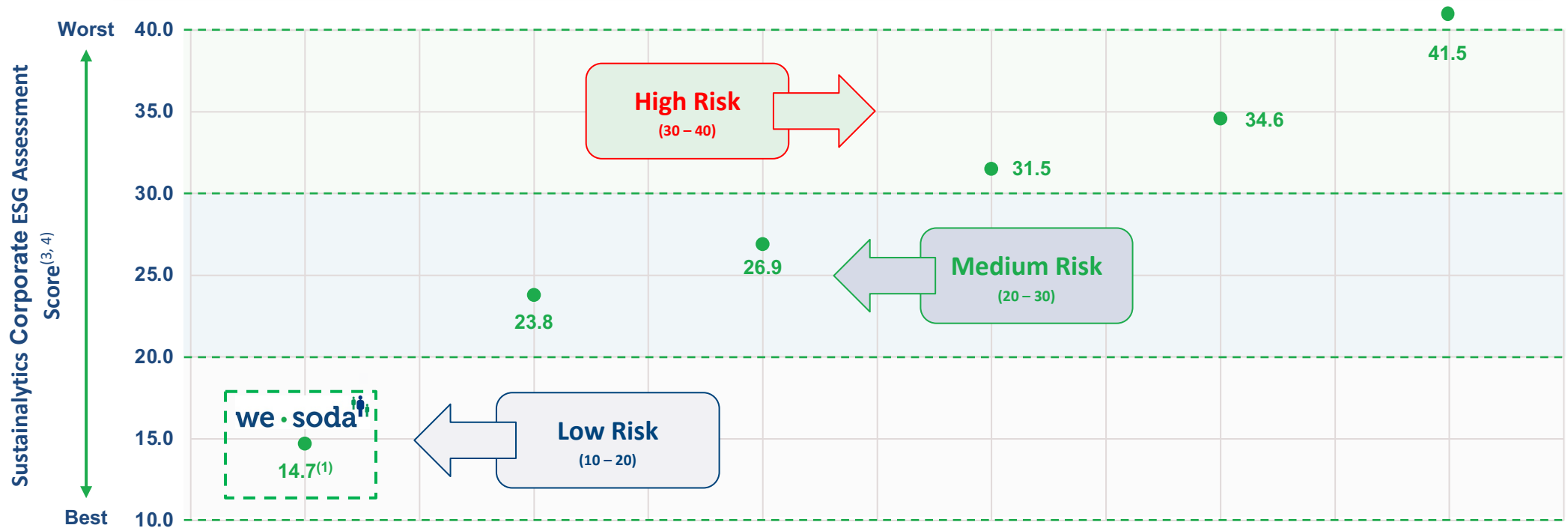
# WE Soda: Our Purpose

**“to responsibly produce essential ingredients for a sustainable future”**

<b><i>“responsibly produce”</i></b>	<ul style="list-style-type: none"> <li>○ <b>Caring for our people</b> (safety and wellbeing)</li> <li>○ <b>Protecting and preserving the environment and nature</b> (emissions, water, waste, surface and subsurface impact and remediation)</li> <li>○ <b>Caring for our communities</b></li> <li>○ <b>Ensuring our supply chain operates to the same standards</b> (upstream and downstream)</li> </ul>
<b><i>“essential ingredients”</i></b>	<ul style="list-style-type: none"> <li>○ Products <b>without which the modern world and society cannot operate</b></li> <li>○ Products with <b>inherent “value”</b></li> <li>○ Developing <b>new uses and more efficient ways to use our products</b>, consistent with our Purpose</li> </ul>
<b><i>“sustainable future”</i></b>	<ul style="list-style-type: none"> <li>○ <b>Supporting the energy transition</b> to a lower carbon, lower waste society and “circular economy”</li> <li>○ <b>Caring for, protecting and preserving our planet</b> and the people and nature which it sustains</li> <li>○ <b>Helping to ensure that, in the future, the world is in better shape than we find it today</b></li> </ul>



# WE Soda: A global sustainability leader



Source: Morningstar Sustainalytics, EcoVadis. Notes: On 16 May 2023, the Company engaged Morningstar Sustainalytics ("Sustainalytics") to perform a corporate ESG assessment (the "Pre-IPO Corporate ESG Assessment") on Kew Soda Ltd as a private company in connection with the Group's contemplated IPO, which did not go forward. Sustainalytics is a leading global provider of ESG research, ratings and data, which provides research based on its independent methodology, and publicly available or non-confidential information from issuers. The Pre-IPO Corporate ESG Assessment is provided for information purposes only, is not part of any offering, nor shall it be considered as an offer to buy or sell or invest in any securities, investment advice, expert opinion or an assurance letter as defined by the applicable legislation. No information provided by Sustainalytics under the Pre-IPO Corporate ESG Assessment shall be considered as being a statement, representation, warranty or argument either in favour against the truthfulness, reliability or completeness of any facts or statements that the Group has made available to Sustainalytics for the purpose of the Pre-IPO Corporate ESG Assessment, in light of the circumstances under which such facts or statements have been presented. Neither the Pre-IPO Corporate ESG Assessment, nor any other information on Sustainalytics' website, is incorporated by reference into this Presentation. 1. As defined by Morningstar Sustainalytics. 2. The score for Kew Soda Ltd, the parent company and 100% owner of WE Soda, is based on the Pre-IPO Corporate ESG Assessment. 3. Including Solvay, Ciech, Sisecam, Tata Chemicals & Genesisenergy. 4. All scores based on Morningstar Sustainalytics website, as of September 2023, with the exception of WE Soda (Kew Soda Ltd).

# WE Soda: Our customer commitments

**Sustainability: Core to our strategy and embedded in everything we do**

Where we focus ?		Why we focus ?	Our commitments
<b>1</b> Operating responsibly	<ul style="list-style-type: none"> <li>Our people</li> <li>Our communities</li> <li>Environment &amp; nature</li> </ul>	<b>Our “license to operate”</b> <i>Fundamental to everything else</i>	<ul style="list-style-type: none"> <li><b>Safety</b> <i>eliminate LTI<sup>1</sup> workplace accidents</i></li> <li><b>Diversity</b> <i>50% female management<sup>2,3</sup></i></li> <li><b>Minimise impact</b> <i>on nature and environment</i></li> </ul>
<b>2</b> Customer service	<ul style="list-style-type: none"> <li>Sustainability leadership</li> <li>Transparency</li> <li>Reducing supply chain risk <i>driving stability and certainty</i></li> </ul>	<b>To become the “supplier of choice”</b> <i>The most sustainable product, always available when and where it is needed</i>	<ul style="list-style-type: none"> <li><b>Carbon</b> <i>40% CO<sub>2</sub>e reduction<sup>3</sup></i></li> <li><b>Net zero</b> <i>by 2050</i></li> <li><b>Water</b> <i>20% water intensity reduction<sup>4</sup></i></li> <li><b>Eliminate waste</b></li> <li><b>ConnexSA</b> <i>to drive sustainability transparency</i></li> </ul>
<b>3</b> Volume growth	<ul style="list-style-type: none"> <li><b>New supply</b> <i>to meet growing demand</i></li> <li><b>Geographic diversity</b></li> </ul>	<b>To ensure 100% reliability of supply</b> <i>Certainty of volume in a supply constrained world</i>	<ul style="list-style-type: none"> <li><b>11 million mtpa</b> <i>by 2030</i></li> <li><b>100% natural</b></li> </ul>

**Underpinned by**

**Culture**

Innovation • Care

**Production method**

Sustainability • Access to resource

**Financial strength**

Cashflow • Balance sheet



We are Soda !