



Mining Challenges Medium and long term

Jorge Cantallopts, Executive Director CESCO
November 2nd, 2022

CESCO

CENTRO DE ESTUDIOS
DEL COBRE Y LA MINERÍA
—
CENTER FOR COPPER
AND MINING STUDIES

Agenda

01.

Global context

02.

Chilean mining

03.

Challenges

04.

Strategies

About CESCO



We are a **platform for encounter** that promotes a **new approach to mining**, from Chile, for a world undergoing dizzying changes.



We seek to promote a new epic movement for copper and other minerals as essential products for a world that is **more sustainable** and based on **clean energies**.



We aspire to **broaden** the conversation around mining, adding more and **new players** towards its analysis and discussion.



We believe in the power of new generations as main promoters for the change mining needs in order to be a **more diverse, inclusive and innovative** industry.

About CESCO



We see the world as our main ally in development, **strengthening ties** with industry at a global level.



We collaborate for **Chile** to continue to be a **mining lead** and main copper producer in the world.



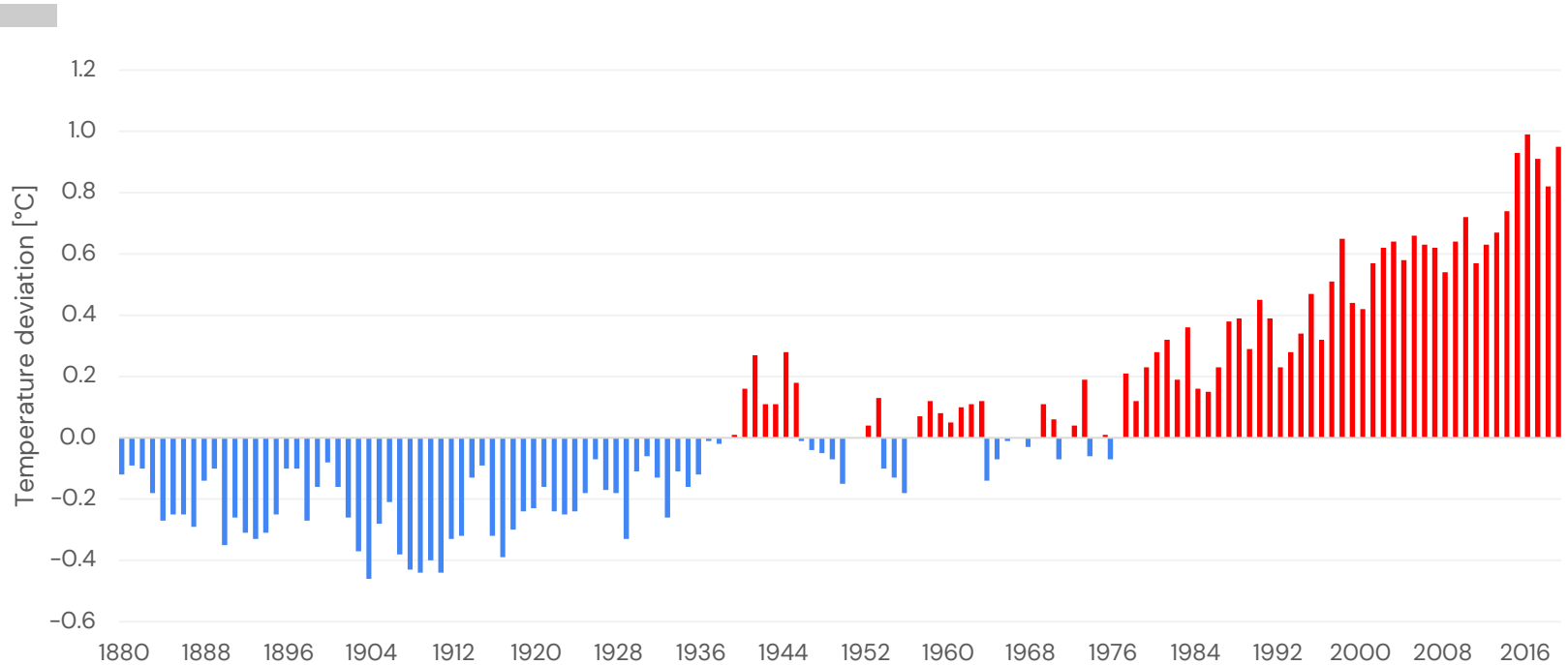
We are optimistic towards the **future of copper and other minerals** and their contribution to technology development, urbanization, electromobility, energy storage, decarbonization of economy and improvement for people's quality of life.



01.

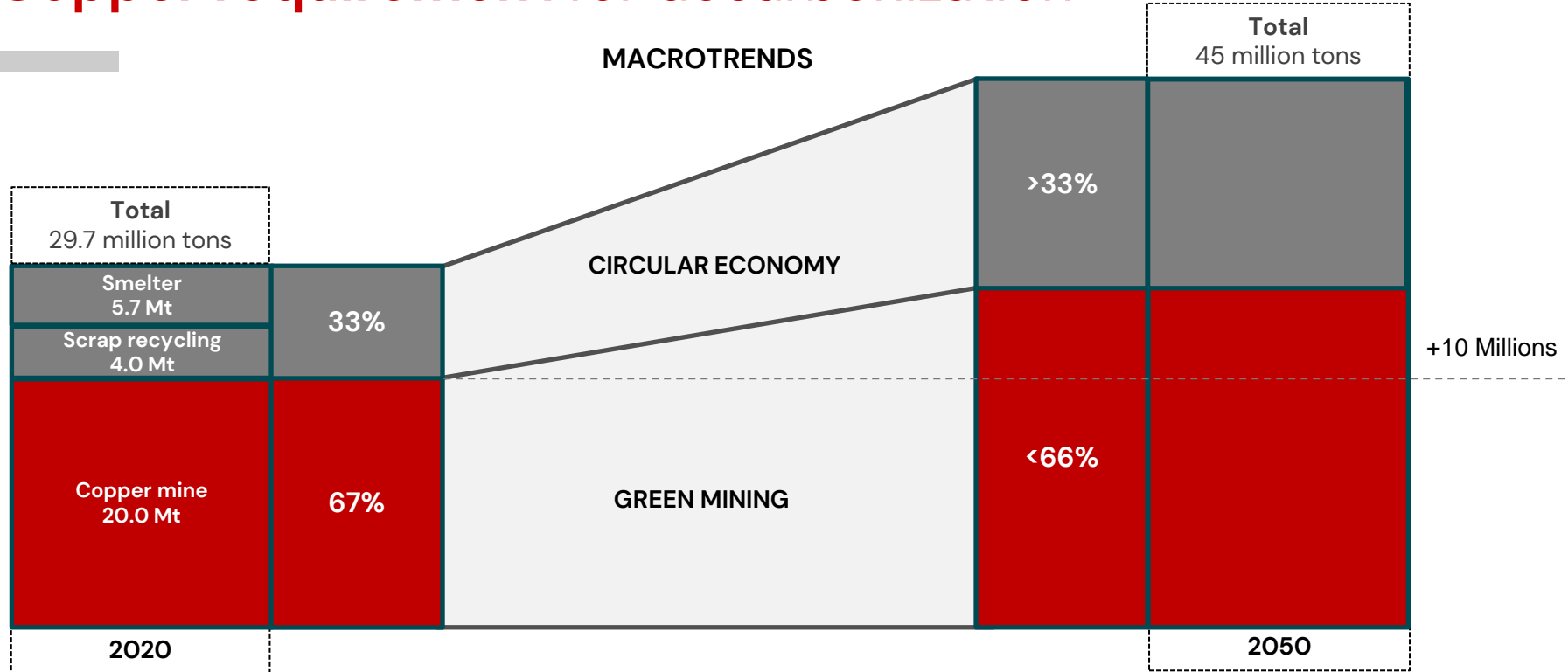
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Global context**

Temperature deviations



Source: National Center for Environmental Information- NOAA

Copper requirement for decarbonization

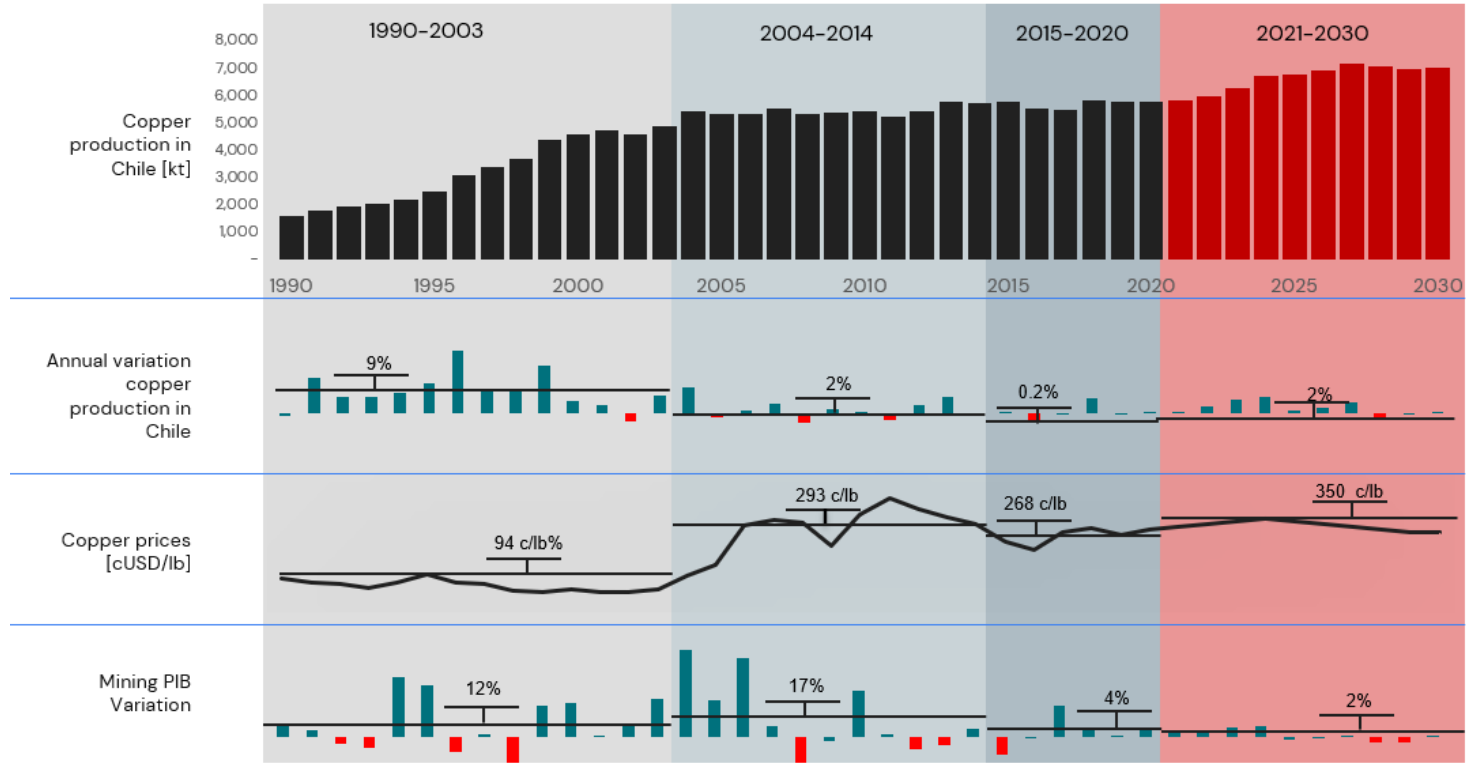




02.

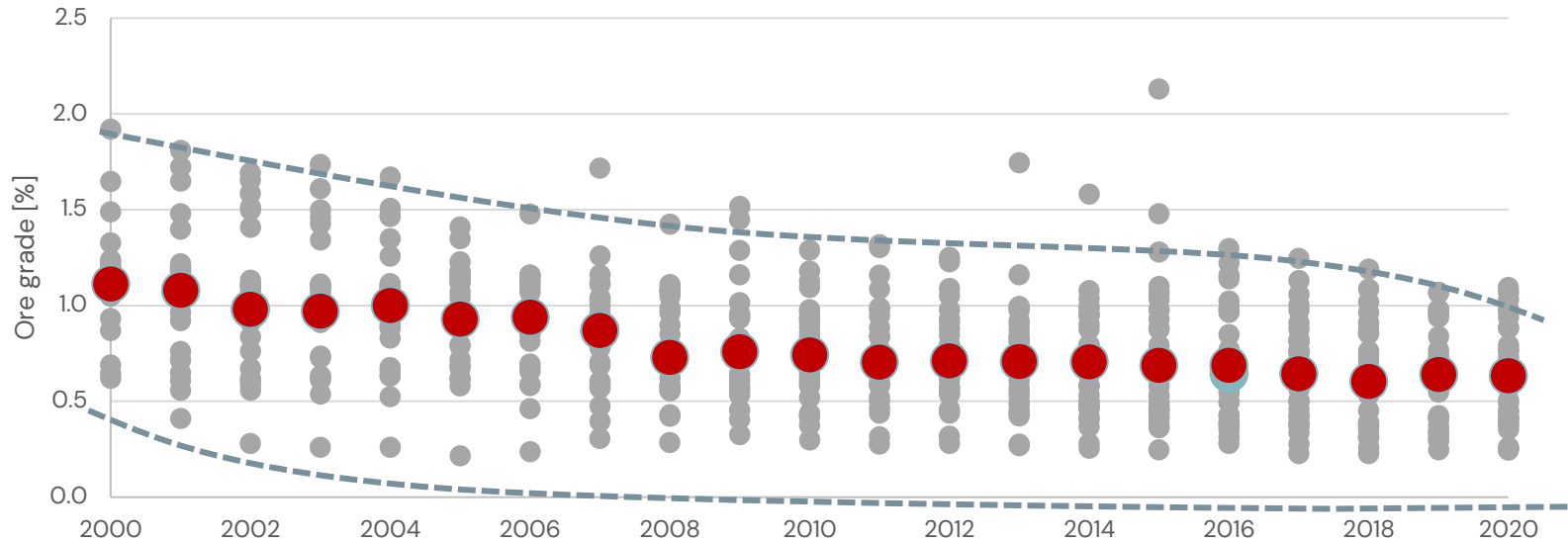
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Chilean Mining

Need for a New Approach



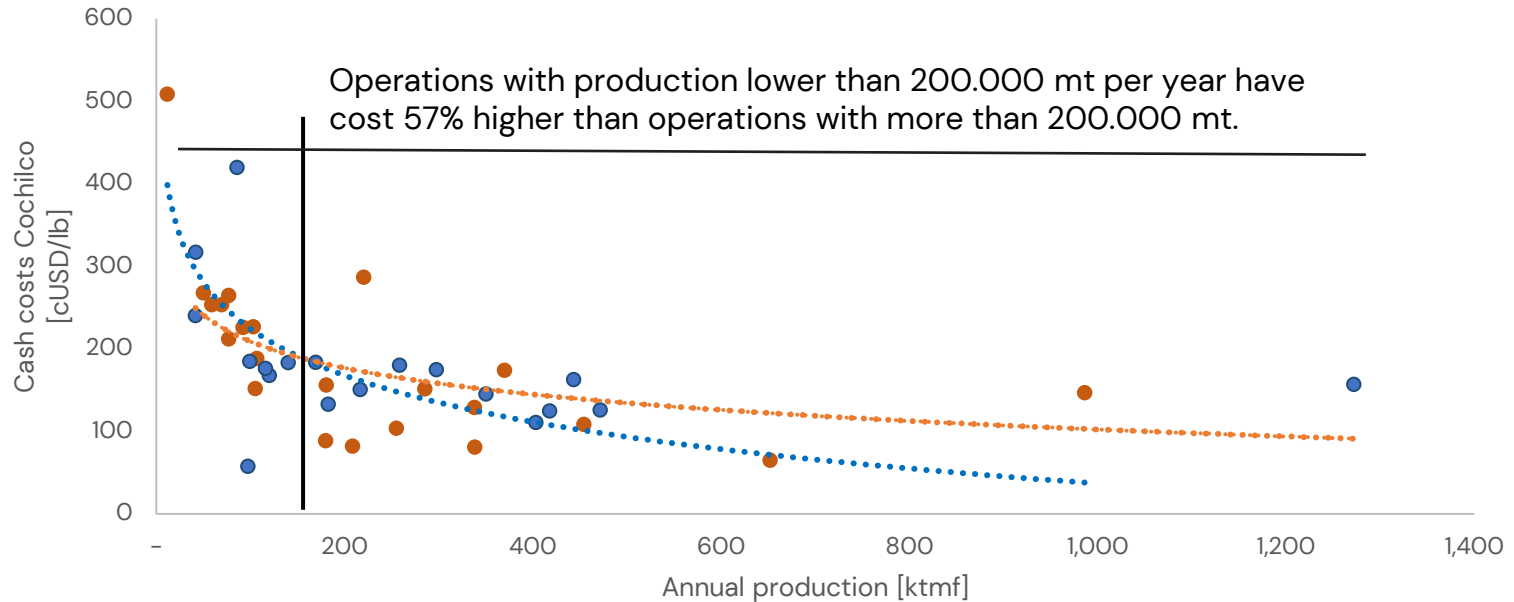
Estimates from Cochilco

Drop in Chilean mining grades



Along with the average grade dropped, there is a significant **decrease in high-grade ore deposits**. There is a high dispersion, but it is lower than in previous decades.

Economies of scale (Cash Costs Cochilco 2011-2021)





03.

**—
Challenges**



Opportunities

- To become leaders in the supply of critical materials for decarbonization.
- Leverage sustainable mining as a driver of economic, social, and environmental development.

Challenges

MINERS

- Dropped grades
- Water scarcity
- Oxide depletion
- Tailings generation
- Environmental liabilities
- GHG emissions and pm

SOCIO-POLITICAL

- Regulatory changes
- Bad image of the industry
- Community rejection





04.
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Strategies

Strategies



Exploration



I+D+i



Advancing value
added



Shared value



Dialogue



Compromise



Institutionally



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