

*Vale Zoo and Botanical Park  
Parauapebas, PA, Brazil*

# **FT Commodities Mining Summit 2021**



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**October 7<sup>th</sup>, 2021**

Public content

*December 2020*

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Disclaimer

Our **strategic pillars** remain solid...

Safety and operational excellence

New pact with society

Maximize flight to quality in Iron Ore

Base Metals transformation

Discipline in capital allocation

Defined in 2019

**Gelado Project**  
*Employee Maria Aparecida Martins*



November 2020

... as well as our **commitments**

People

Safety

Reparation

**Serra Norte**  
*Employee Beatriz Dias*



# We are walking the talk

## De-risking



- Brumadinho
- Dam safety
- Robust ESG Practices
- Production resumption

## Reshaping



- Focus on core business
- Control of cash drains
- Growth opportunities

## Re-rating



- Benchmark in safety
- Best-in-class reliable operator
- Talent-driven organization
- Leader in low-carbon mining
- Reference in creating and sharing value

Sound cash flow generation

Discipline in capital allocation



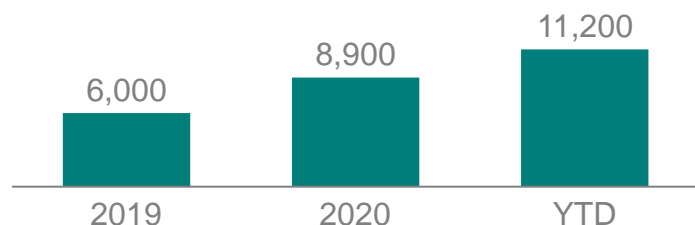
# We have made progress in repairing Brumadinho

## Integral Reparation Settlement Agreement

- + **R\$ 37.7 billion** in total economic value
  - ↳ **R\$ 9 billion<sup>1</sup>** directly to the affected people
- + Clear governance, legal certainty and known impact

## Individuals with indemnification agreements<sup>2</sup>

Number of individuals, cumulative view



**R\$ 2.7 billion**  
in individual indemnifications<sup>2</sup>

## New water pipeline system

Paraopeba River, MG, Brazil



<sup>1</sup> Approximate figure, including amounts already disbursed.

<sup>2</sup> Related to agreements entered into as of September 2021, approximate figures.



# We are improving our dam safety

## Upstream<sup>1</sup> Dam<sup>2</sup> Decharacterization Program

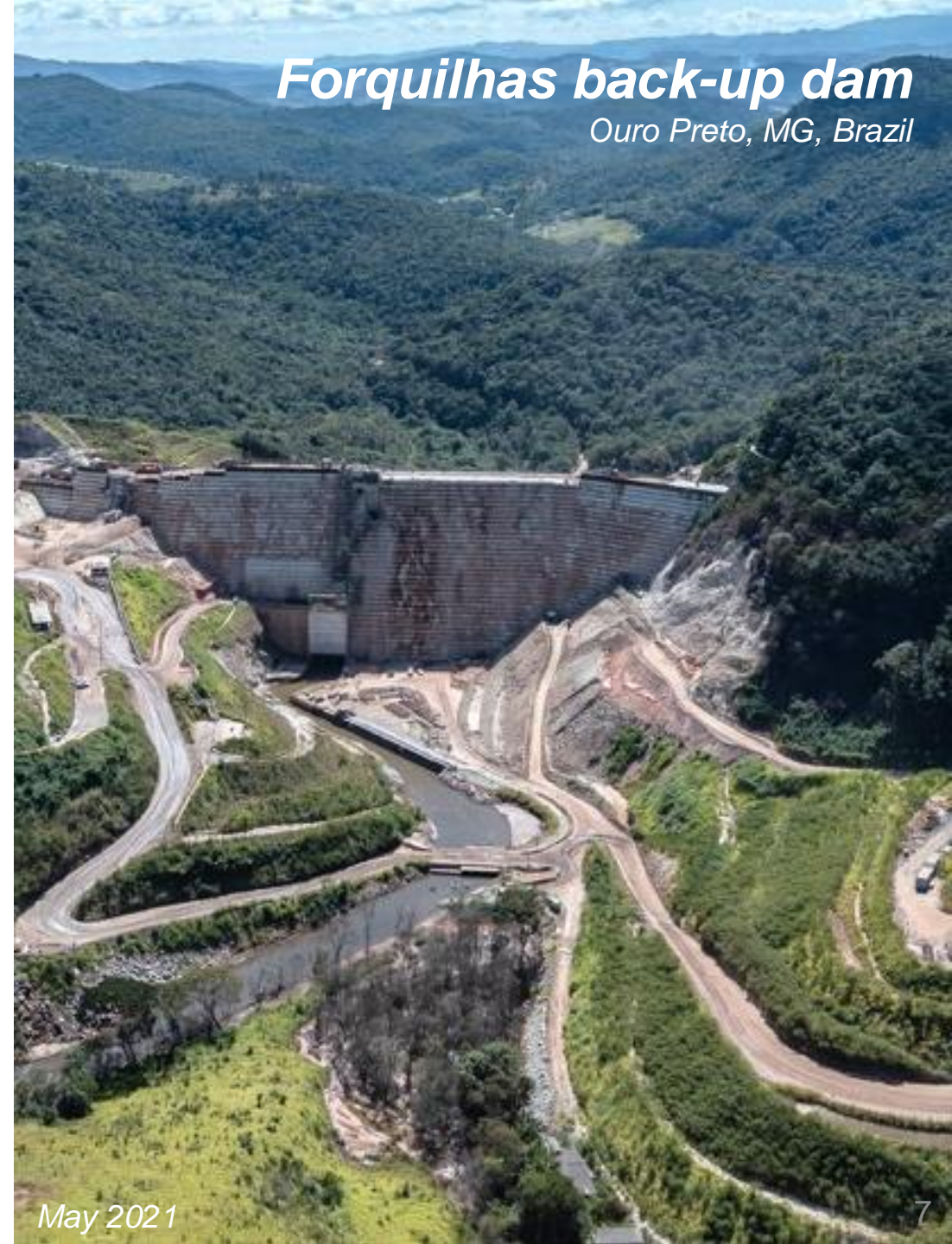
- **6 upstream dams eliminated since 2019**
- 24 upstream dams to eliminate
- Back-up dams for all level-3 dams
- No dam at emergency level 3 by 2025
- Program's completion by 2029

<sup>1</sup> Same raising method deployed at B1 dam, collapsed in Brumadinho.

<sup>2</sup> Includes dams, dikes and waste piles.

## Forquilhas back-up dam

Ouro Preto, MG, Brazil

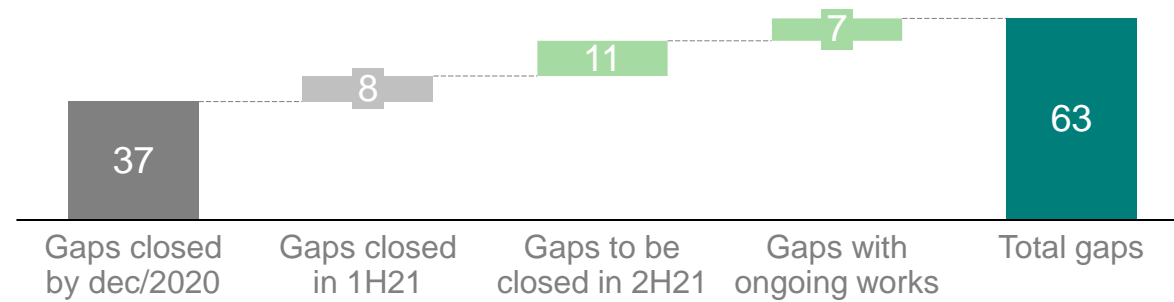


May 2021



# We are leveling up our ESG practices

## ESG gaps<sup>1</sup> by estimated conclusion date



## Rating upgrades

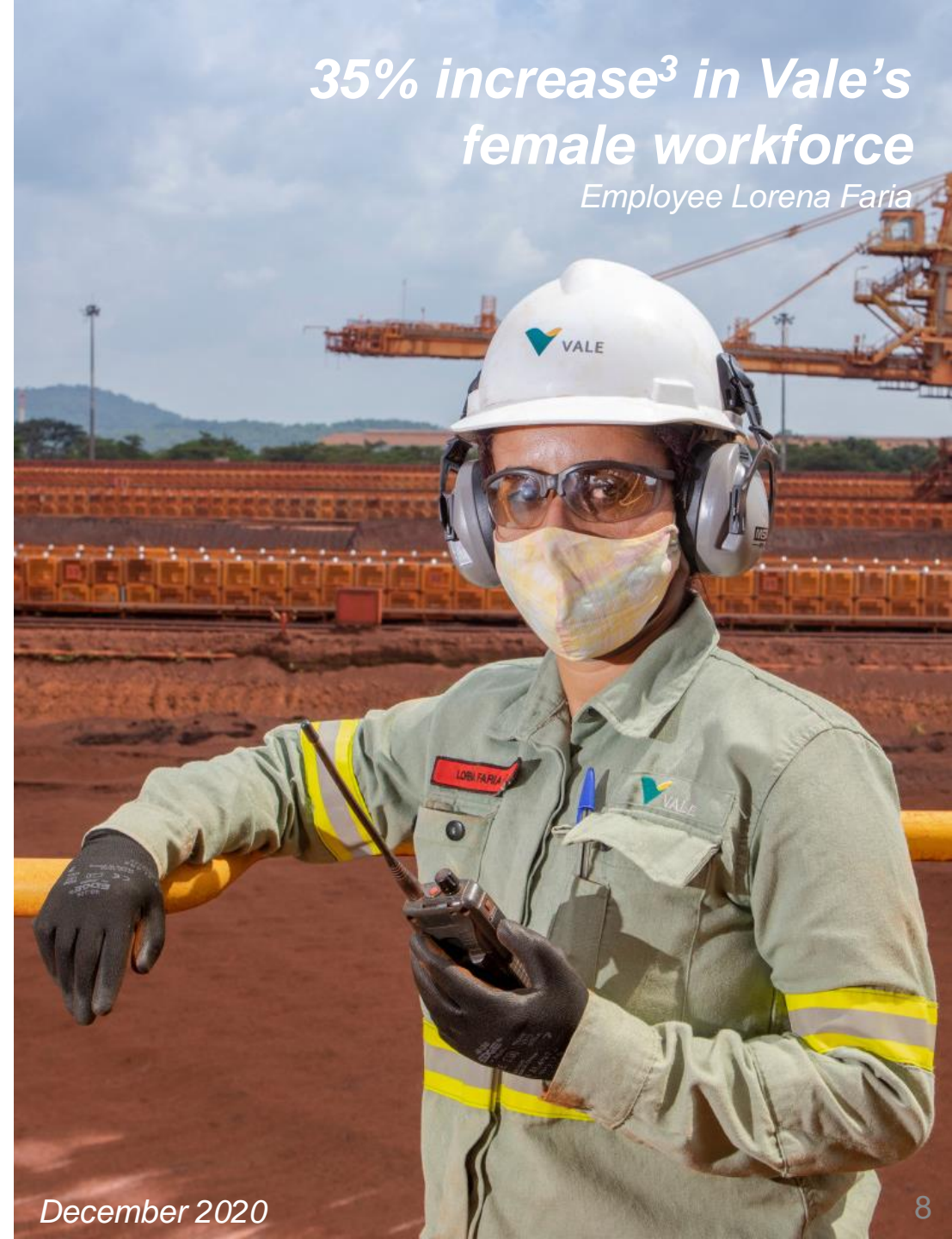


- **Fitch** (investment grade)
- **Moody's** (investment grade)
- **Sustainalytics ESG** (from 54.5 to 38.7<sup>2</sup>)
- **ISS ESG** (from C to C+)

<sup>1</sup> Vale has analyzed and studied the methodology behind our leading ESG information providers. A gap analysis identified gaps concerning best practices, and we have mapped an action plan to close these gaps. <sup>2</sup> In Sustainalytics ESG rating, the lower, the better. <sup>3</sup> In September 2021 compared to December 2019.

35% increase<sup>3</sup> in Vale's female workforce

Employee Lorena Faria



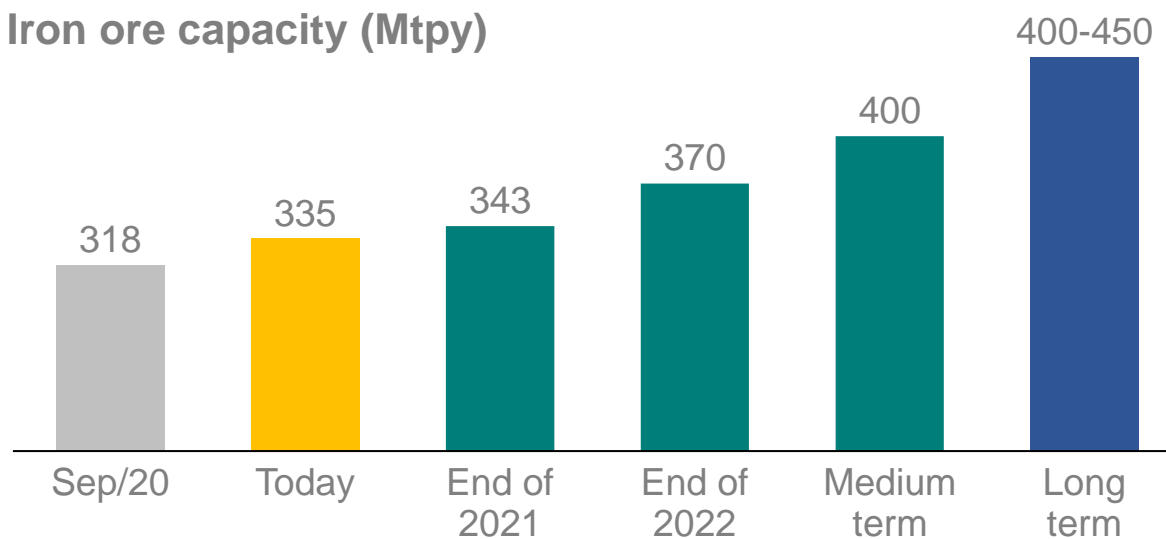
December 2020





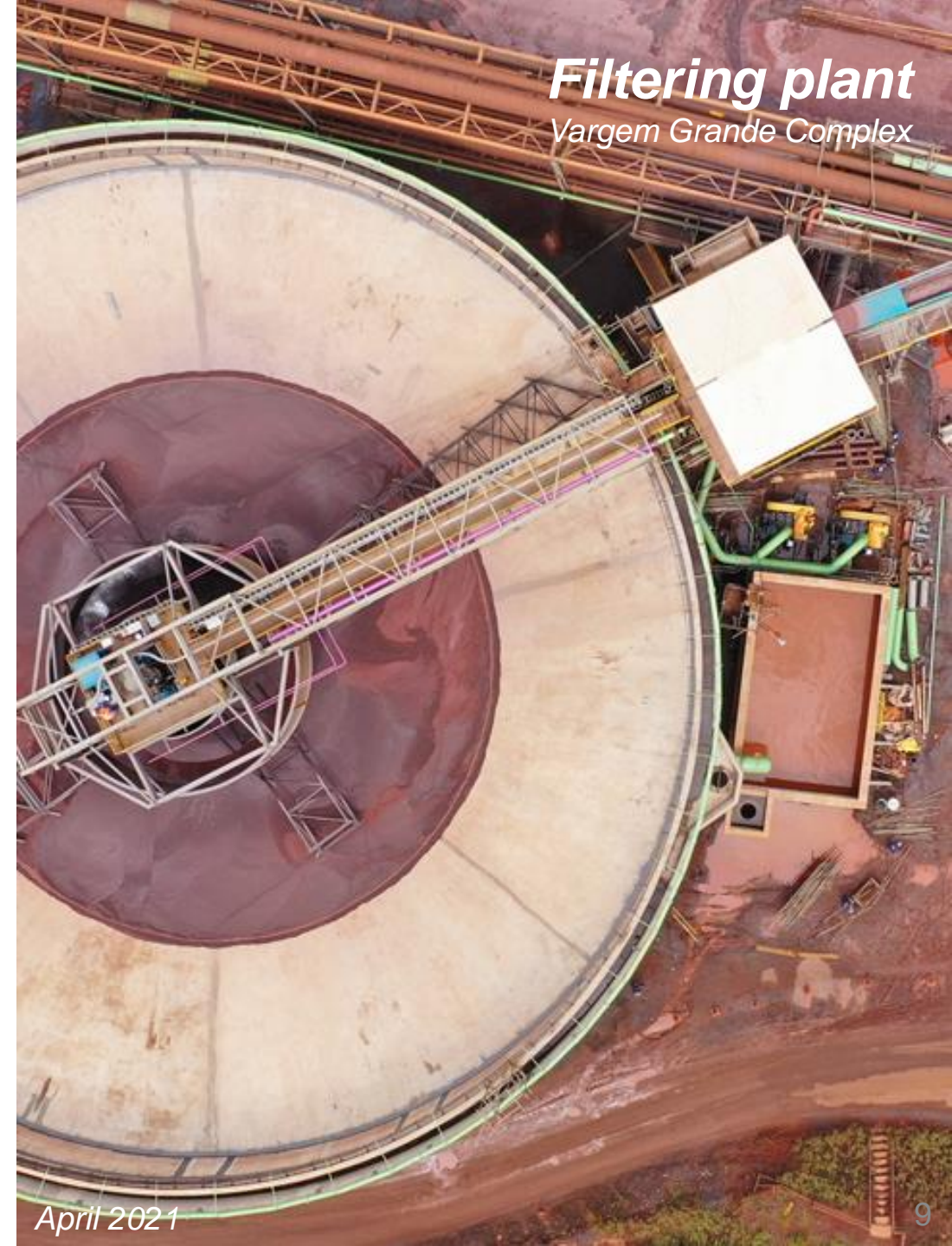
# We are progressing on our resumption plan

Iron ore capacity (Mtpy)



**Production guidance 2021**  
**315-335 Mt**

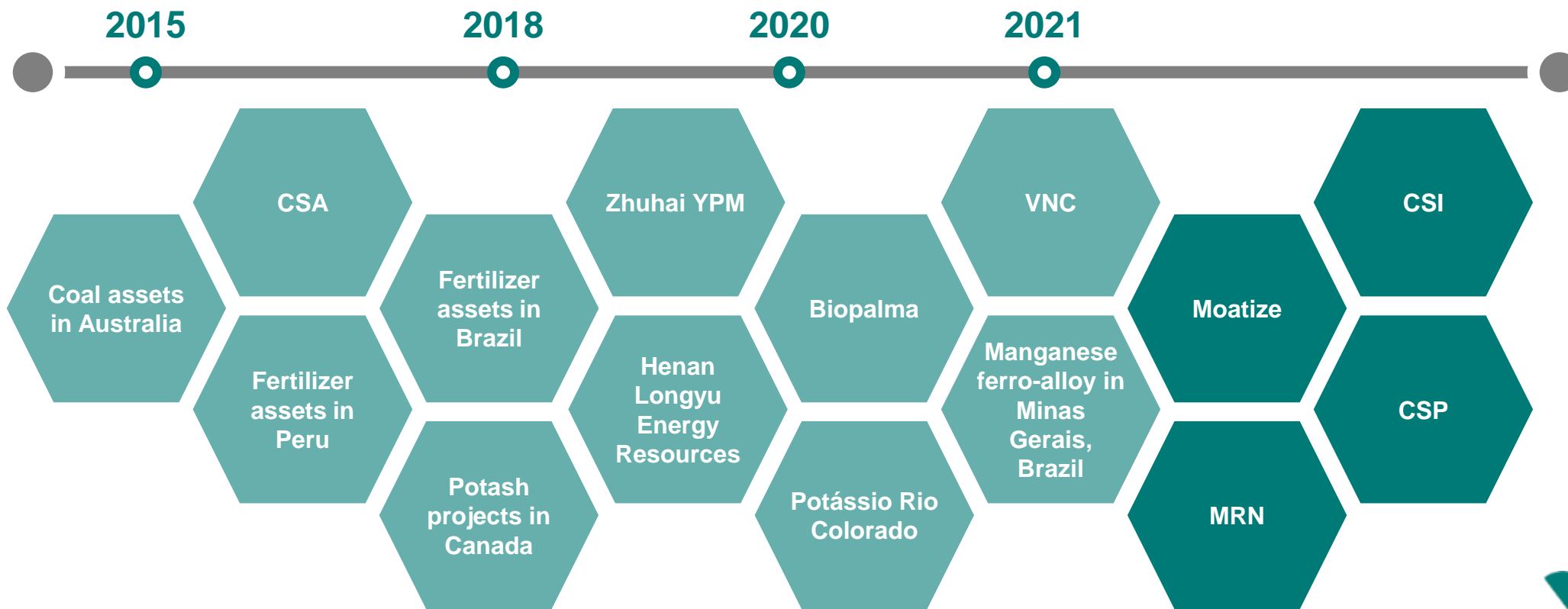
**Filtering plant**  
Vargem Grande Complex



April 2021



# We are moving towards a leaner portfolio

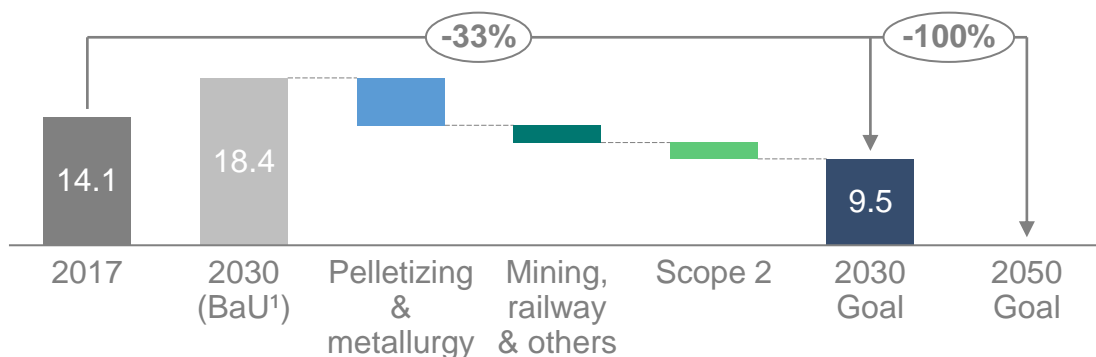


Note: in 2020, Vale closed its Manganese alloys operations in Simões Filho-BA and no longer has any alloy production operations.



# A leader in low-carbon mining

Target to reduce 33% of scope 1 and 2 absolute emissions by 2030  
Mt CO<sub>2</sub> eq.



## Main technological routes to drive decarbonization



Energy efficiency and renewables



Electrification



Bioenergy



New processes

<sup>1</sup> BaU stands for business as usual. Scenario based on production of ~400Mtpy iron ore.



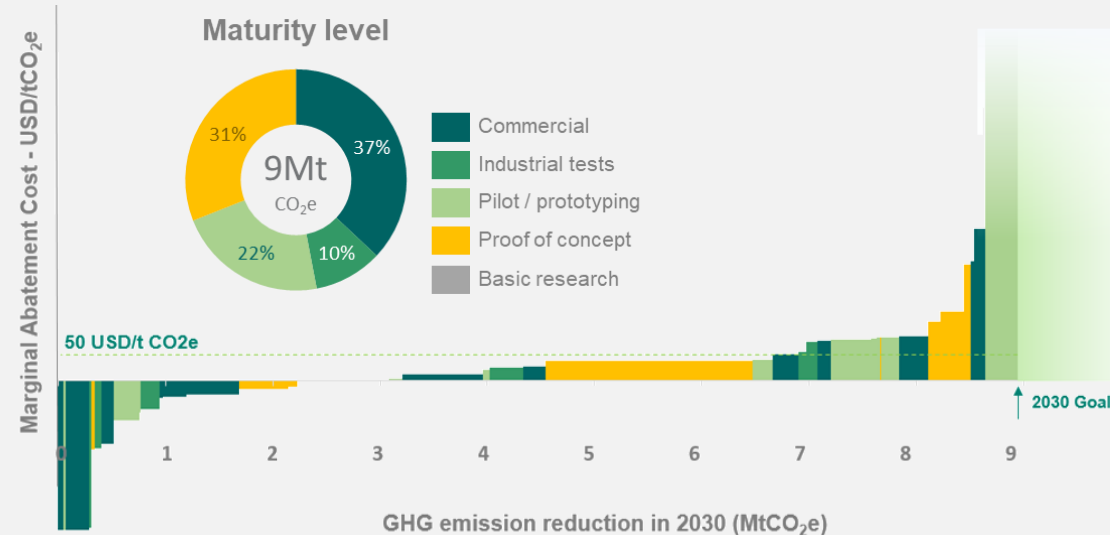
100% electric locomotive  
Vitória, ES, Brazil



# We are relying on **robust tools** to align our **capital allocation**

- Increase in low carbon CAPEX: **US\$ 4-6 billion investment by 2030** for GHG reduction
- **US\$ 50/tCO<sub>2</sub>e** shadow price for all capital allocation decisions
- **Portfolio of GHG reduction opportunities:** marginal abatement cost curve updated on an annual basis, in order to prioritize most cost-efficient projects to pilot and scale up
- **~80% of initiatives mapped are NPV positive<sup>1</sup>** at the considered shadow price, with increased technological maturity due to piloting and studies

## MAC curve highlights – 2021 update



- Increased number of emission reduction initiatives from 30+ in 2020 to 40+ in 2021
- Increased maturity of projects through pilots
- ~50% of commercial entering FEL stage

<sup>1</sup> As of June 2021. Values include assumptions for low maturity technologies, carrying uncertainties.

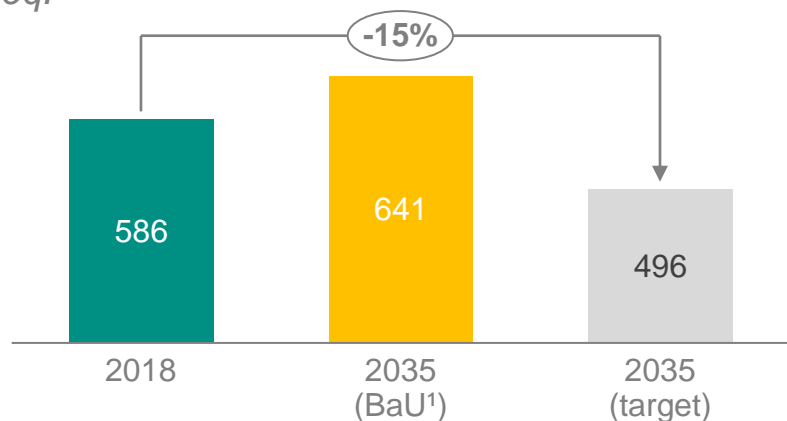


World's first ore carrier equipped with rotor sails

Vitória, ES, Brazil

# Pioneer scope 3 target

Absolute scope 3 net emissions  
Mt CO<sub>2</sub> eq.



## Partnership and engagement (75-85% of the challenge)

Leveraging steel industry decarbonization initiatives

Supporting a reduction in shipping emissions<sup>2</sup>

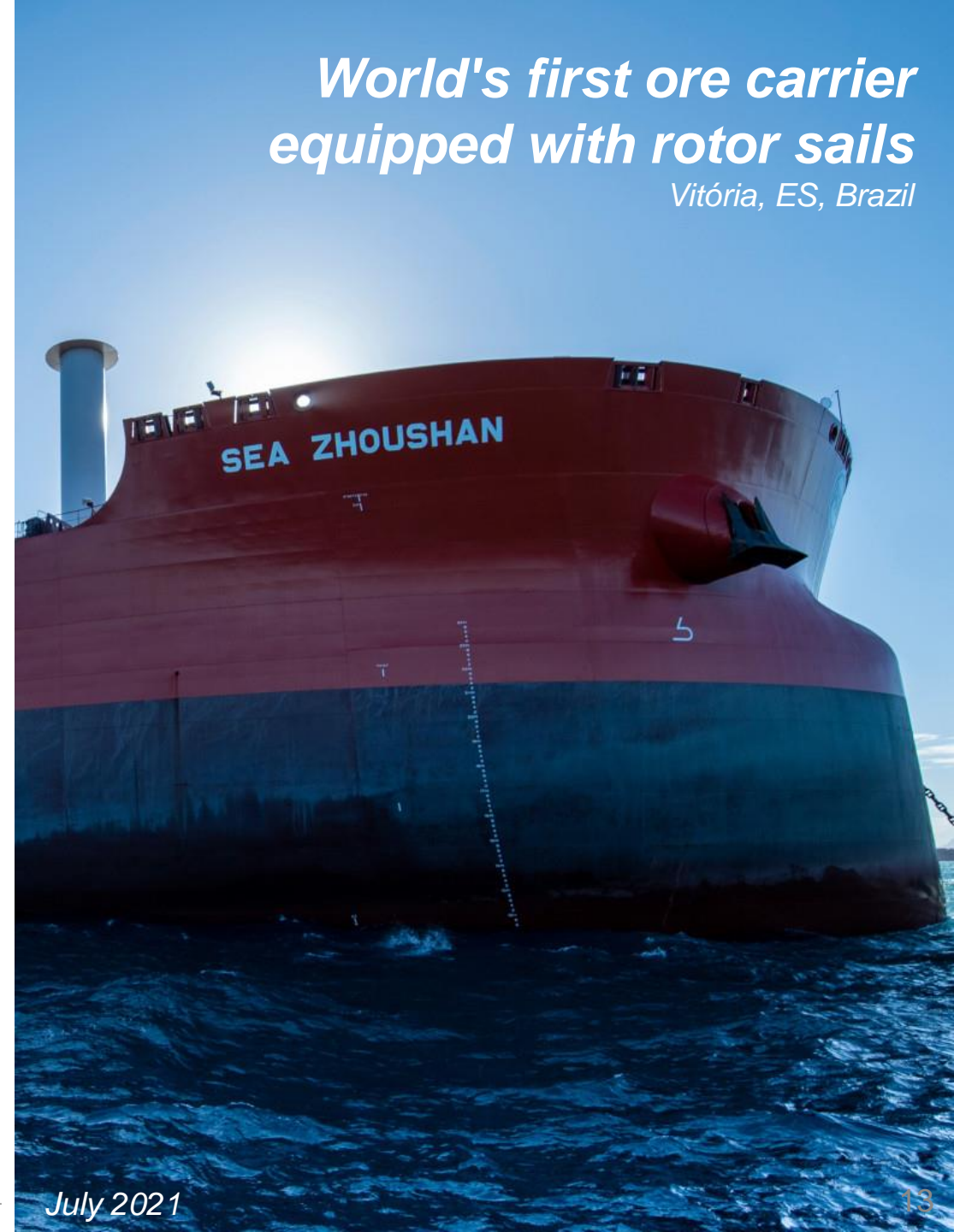
## Vale's own initiatives (15-25% of the challenge)

Improving our high-quality portfolio

Developing new technologies and asset light solutions

Robust and credible carbon offsets

Note: Vale is also committed to revising its scope 3 target in 2025 and every 5 years, in order to reevaluate technological developments and global climate policy advancements.  
<sup>1</sup> BaU stands for business as usual. Scenario based on production of ~400Mtpy iron ore. Reduction target based on Science Based Target Setting tool for Scope 3, including offsets.  
<sup>2</sup> Target to reduce intensity in 40% by 2030 and 50% absolute emissions vs. emissions in 2008 (reference year).



Re-rating



# Iron Ore Briquette to boost steel decarbonization

## In-house, exclusive technology

Decades of experience with agglomerates  
Technology patented<sup>1</sup> in 47 countries

## Less CO2 emissions

**Blast furnaces:** reduction of over 10% in BF-BOF route<sup>2</sup>  
**Direct reduction furnaces:** 80% less vs. pelletizing process<sup>3</sup>

## 3 plants under construction

A US\$ 185-million investment in Brazil, ~7 Mtpy capacity  
5 other plants under analysis, up to 50 Mtpy capacity

<sup>1</sup> Patented or in submission process. <sup>2</sup> Considering substitution of sintering. <sup>3</sup> Considering scope 1 and 2. Briquetting process also has 99% less SOx, 75% less NOx and 20% less particulates emissions than pelletizing process.

Iron ore  
briquettes



September 2021

# Protecting and recovering forests in Brazil

**1,000,000 ha** protected forests by 2019  
**80%** *in the Amazon*

**+500,000 ha** additional area for recovery and protection by 2030  
**11%** *complete by Sep 2021*



We recognize that nature-based solutions can play a role in carbon removal and offsets



We are prioritizing projects with positive socioeconomic impacts, engaging with local communities

***Aerial view of Tapirapé-Aquiri National Forest***

*Marabá, Pará, (PA), Brazil*



# Our discipline in capital allocation continues

## Reparation

- Brumadinho
- Renova
- ✓ Integral Reparation Settlement Agreement: US\$ 4.021 billion provision<sup>1</sup>
- ✓ Renova Foundation: US\$ 2.491 billion provision<sup>1</sup>
- ✓ Individual indemnifications, emergency aid and other reparation payments: US\$ 470 million<sup>1</sup>

## De-risking

- Safety & Operational Excellence
- Production resumption
- ESG
- Other obligations
- ✓ Provision of US\$ 2.155 billion for upstream dam decharacterization <sup>1</sup>
- ✓ US\$ 4-6 billion - investment to reduce GHG by 2030<sup>2</sup>

## Shareholder remuneration

**Dividends 1H21**  
US\$ 6.1 billion

**Dividends 2H21**  
US\$ 7.6 billion

**Share Buyback Program**  
US\$ 4.8 billion<sup>3</sup> disbursed until Sep/21

## Growth opportunities

- Growth projects
- Other growth options
- ✓ Low-CAPEX growth options
- ✓ Salobo IV +30 ktpy
- ✓ Onça Puma 2nd furnace

<sup>1</sup> Balance of provisions as of June 30, 2021, exchange and present value adjustment. buyback date.






<sup>2</sup> Initiatives to reduce scopes 1 and 2 emissions.

<sup>3</sup> Calculated using the exchange rate (PTAX sell) on the








# We are **delivering** to close the gap






## In **2020**, we said we would...

-  Set a scope 3 net emissions target reduction (15% by 2035)
-  Run the first Board Election with a Nomination Committee
-  Launch the Integrated Report
-  Double % of our female workforce by 2030
-  Recover and protect +500,000 ha of forests by 2030

## In **2021**, we...

-  Reached a R\$ 37.7-billion settlement agreement for the Reparation of Brumadinho
-  Announced US\$ 4-6 billion investments for scope 1 & 2<sup>1</sup>
-  Launched innovative iron ore products to reduce scope 3
-  Reached 35%-increase of female workforce
-  Linked 55-80% of executive short-term compensation to ESG factors

## Our **next steps** are...

-  Deliver 120,000 ha of our forest protection goal by late 2021
-  Publish our TCFD Report in the next few weeks
-  Decharacterize 1 more upstream structure by the end of 2021 (6 out of 30 already complete)
-  Be fully compliant with the GISTM
-  Close ESG gaps

<sup>1</sup> By 2030.

