



Sustainable ocean freight



Shipping is the backbone of the global economy, and is responsible for around 90% of world trade¹.

2.9%

Total global CO₂ emissions accounted for by the shipping sector.

50–250%

Estimated expected increase by 2050 under a business-as-usual scenario.

The industry plays a crucial role in keeping the world's economy running by facilitating effective movement of food and manufactured goods around the globe.

Today, more than 50,000 merchant ships trade internationally², transporting every kind of cargo. Currently, the sector accounts for 2.9% of total global CO₂ emissions³, with an estimated expected increase between 50% and 250% by 2050 under a business-as-usual scenario.

Seaborne trade is recognised as one of the most efficient forms of commercial transport globally, but the scale of the industry and its expected growth in the near future make shipping a significant contributor to the world's total greenhouse (GHG) emissions. Increasing efficiency, technology advancements and growing economic liberalisation are fuelling the industry's prospects for sustainable growth and long-term decarbonisation.

¹ Source: International Chamber of Shipping

² Source: International Chamber of Shipping

³ Source: Fourth IMO GHG Study 2020



Anglo American's shipping operations

Since establishing our shipping operations in 2012, safe, reliable and sustainable ocean freight has gradually grown to become a critical component of Anglo American's offering to customers.

We operate across multiple trade routes and use a range of vessels of varying sizes and types, providing freight services for iron ore, coal, copper concentrate, chrome, metallic copper, metallic nickel and ferronickel, and ensuring that our products are delivered to our global customer base through our chartered fleet.

From our shipping hubs of Singapore and Santiago (Chile), we operate vessels transporting bulk cargoes predominantly from our mines in South Africa, Australia, Brazil and Chile to our customers all over the world.

Our capabilities and experience in the maritime industry provide us with unique insights and expertise to contribute to shaping a more innovative, lower carbon and overall more sustainable shipping sector, while connecting essential resources with those who need and value them.

"Connecting our customers with the resources they need in a way that is safe, efficient and sustainable is a key priority for us, and a crucial component in our efforts to extend our impact beyond our mine sites."

Over more than 10 years of operations we have built a diverse and wideranging network of activities. Today, we transport more than 70 million tonnes of dry bulk products per year to our customers around the world."

Peter Lye

Global Head of Shipping, Anglo American



Collaborating for a more sustainable shipping industry

Our commitment is articulated across a comprehensive framework of medium- and long-term, diverse and complementary measures culminating in our ambition to reach carbon neutrality across our controlled ocean freight activities by 2040, with an interim 30% reduction in emissions by 2030.

These efforts are born from the goals and commitments set out in the Anglo American Sustainable Mining Plan which outlines our target to achieve carbon neutrality across all our operations by 2040, and our Group’s ambition to reduce Scope 3 emissions – or emissions in our value chains – by 50% by 2050.

“We are committed to playing an active role in accelerating the transition to a more sustainable shipping sector – a natural extension of Anglo American’s goal to be carbon neutral across our operations by 2040.

Our ambition to decarbonise our controlled ocean freight activities by the same year further cements that commitment.”

Peter Whitcutt
CEO Marketing, Anglo American

2040

Ambition to achieve carbon neutral controlled ocean freight.

30%

Interim reduction in emissions by 2030.

Our roadmap to deliver on our sustainability ambitions builds on technology innovations and high standards in vessel efficiency.

We have a strong track record of collaborating across the entire industry to achieve more responsible and sustainable ocean freight.

As we work to make tangible progress decarbonising our operations, we are also accelerating our efforts to introduce a greener fuel mix. Vessel retrofits, the use of voyage optimisation software, and support for technology development to help enable the switch from conventional fuel oil to sustainable marine fuels are all part of our efforts to decarbonise ocean freight activities.

Our approach will be backed by regular and validated emissions performance reporting, such as being part of the Sea Cargo Charter’s Annual Disclosure Report.

The first Annual Disclosure Report of the Sea Cargo Charter was released in June 2022, reporting Anglo American’s shipping operations’ climate score as in line with the expectations set out by the International Maritime Organization’s (IMO) goal of reducing shipping emissions by at least 50% by 2050.

Exploring and trialling alternative fuel options

Alternative marine fuels have an important role to play in the decarbonisation journey, with a number of potential options being explored – from liquefied natural gas (LNG) and biofuel, to hydrogen and ammonia.

LNG

Compared to conventional fuel options, liquefied natural gas (LNG) can reduce CO₂ emissions by approximately 35%¹.

In addition to CO₂ reductions, LNG also eliminates sulphur oxides, and considerably reduces nitrogen oxides and particulate matter from vessel exhausts – with the uptake of bio-LNG and continued developments in synthetic LNG representing the potential for more ambitious outcomes in future.

LNG also has the advantage of being readily available and benefits from an established network of existing infrastructure on key trading routes.

Recognising the potential for near-term emissions reduction offered by LNG, Anglo American has announced the

introduction of its new Ubuntu chartered fleet, 10 newbuild LNG-fuelled capesize+ vessels. The fleet will be equipped with cutting edge technology designed to eliminate the release of unburnt methane, also known as methane slip.

The transition to LNG also provides key opportunities for the deployment of bio-LNG, a biofuel with the same chemical composition of traditional LNG that has the potential to provide a fully renewable fuel source for the maritime industry.

Sustainable Biofuel

The suitability of sustainable biofuel as an effective alternative to marine fossil fuel is being increasingly demonstrated through the growing number of tests and trials taking place across the industry.

By collaborating across the industry, we are exploring the introduction of innovative biodiesel blends to our own chartered fleet, in an effort to develop – together with like-minded players and institutions in the maritime space – a solution compatible with existing vessel engines and which therefore requires no infrastructure modification.

In June 2021, we successfully conducted our first trial of sustainable biofuel using a blend produced by converting waste cooking oil from Singapore’s food and beverage industry, reducing CO₂ emissions by approximately 5% compared with using 100% conventional marine fuel.

In early 2022, we completed a second trial, also in Singapore, this time using a blend of biodiesel with very low sulphur fuel oil (VLSFO), the industry’s most widely used conventional marine fuel, demonstrating potential for sustainable biofuel to be used as a ‘drop-in’ fuel, improving its viability to help reduce emissions in the shipping sector.

We continue working with the relevant authorities and industry bodies to accelerate the introduction of sustainable biofuel blends.

Green ammonia and hydrogen

Hydrogen and ammonia have a promising future. As an early supporter of the hydrogen economy, we have invested significantly in this space.

We are partnering with Hydrogenious Maritime AS to explore the use of innovative Liquid Organic Hydrogen Carrier (LOHC) technology. By chemically bonding hydrogen to a diesel-like liquid with a high-storage density, which can be stored under ambient conditions (pressure and temperature), this solution can help propel hydrogen’s viability for marine transportation.

Ammonia, which emits no CO₂ when combusted, has potential both as a fuel in its own right and as a hydrogen carrier. However, there is significant work that still needs to be done to ensure green ammonia is brought to market in a safe and sustainable way. To examine its prospects, we are working with industry partners to study possible solutions for more widespread adoption.

Methanol and auxiliary efficiency drivers

We are exploring methanol as an alternate future fuel.

Methanol has a carbon molecule in this composition and will achieve net zero instead of zero carbon. Unlike ammonia, the handling of methanol, which is a drop-in fuel, is significantly easier. The industry landscape for methanol is more mature, with well-known risks, while its use does not require high initial conversion costs. These qualities make it one of the viable value-adding propositions for the existing fleet of vessels on the water today.

Finally, for transitioning towards a zero-emission future, we are studying and discussing supporting technologies, such as wind assisted propulsion systems or friction reducing systems, that can supplement our overall efforts.

¹ The switch to LNG alone is generally estimated to allow a reduction of 25% of CO₂ emissions. When supported by the right technology, it enables our chartered fleet to reach an overall emissions reduction of 35%.

Introducing the Ubuntu fleet

In 2020, Anglo American announced the introduction of 10 newbuild Capesize+ LNG-fuelled vessels to its chartered fleet.

The newbuilds – designed to be larger than, but just as flexible as, conventional capesize vessels – are expected to carry up to ten million tonnes of product per annum, transporting iron ore from Anglo American’s operations in Brazil and South Africa to the company’s global customer base.

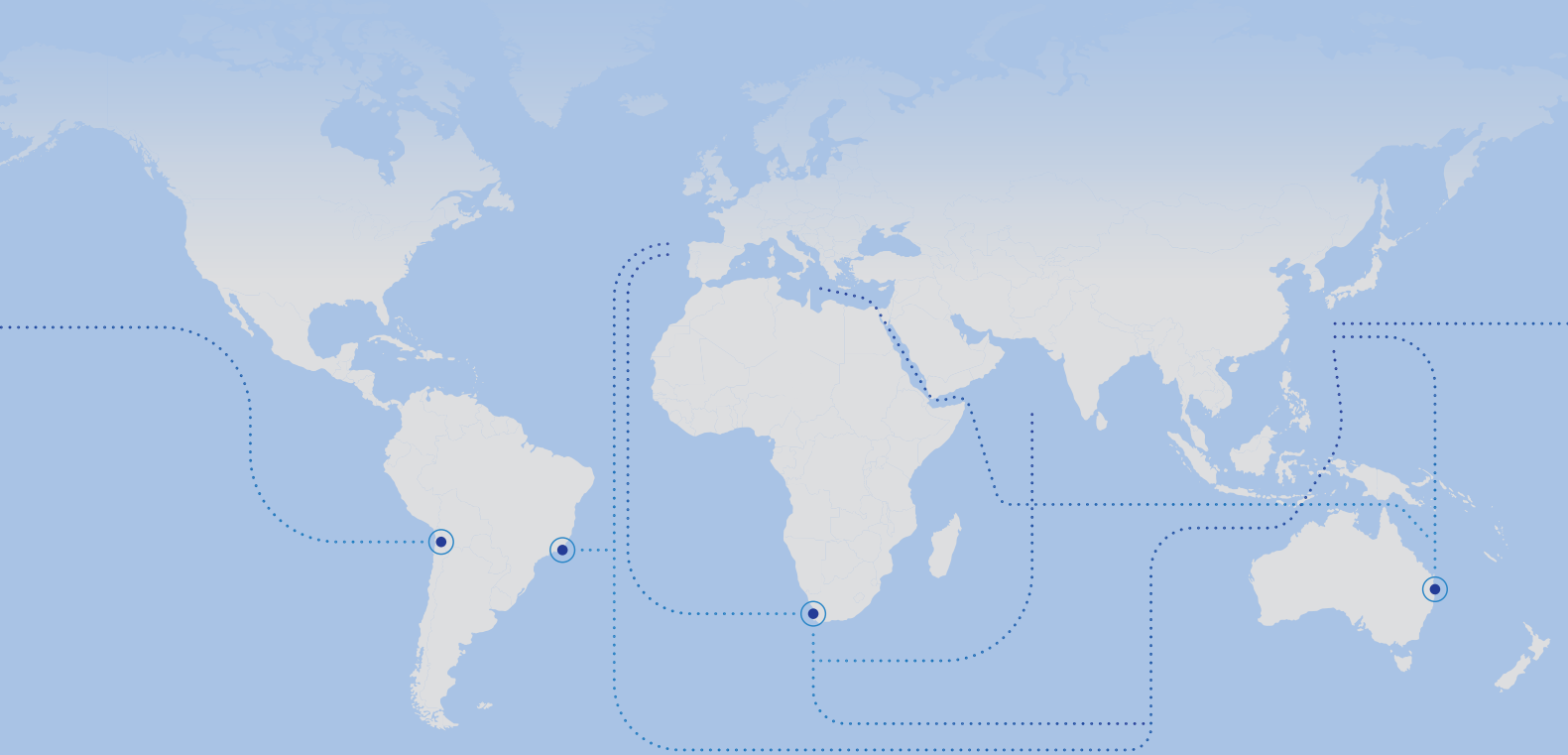
The fleet is named ‘Ubuntu’, from the Zulu word meaning “I am, because you are”, which originates from the belief that the community

is a key foundation of society – a tribute to Anglo American’s South African origins.

The Ubuntu fleet will be flagged and registered in Singapore and UK, which will also serve as prime bunkering port, thereby avoiding deviations from trading routes for refuelling purposes.

Since December 2022, our vessels have been gradually coming into operations and the full fleet is expected to be delivered by 1H 2024.

Our key trade routes



A collaborative effort

Decarbonising shipping requires system-level innovation and close, cross-industry collaboration.

Replacing or updating existing marine assets – which typically have a long lifespan – depends on cost, complexity and the rate at which alternative technology solutions can be developed.

Cross-industry partnerships and collaboration forums are crucial in accelerating the transition to a greener shipping sector, and our participation in them are testament of our commitment to the cause. We are actively engaged in many of the critical conversations aimed at accelerating change across the sector.



Global Maritime Forum

The Global Maritime Forum (GMF) was founded in 2018 with an objective to shape the future of global seaborne trade. It aims to increase sustainable long-term economic development and human wellbeing by bringing together high-level leaders from across the maritime industry with policymakers, NGOs, experts and other influential decision-makers and opinion shapers to address global challenges that are particularly important to the maritime industry. Anglo American was the first mining company to join the GMF as a partner member.



Getting to Zero Coalition

In September 2019, Anglo American was one of more than 100 companies to join the Getting to Zero Coalition, an alliance committed to getting commercially viable deep sea zero emission vessels powered by zero emission fuels into operation by 2030. The Getting to Zero Coalition is a partnership between the Global Maritime Forum, Friends of Ocean Action, and the World Economic Forum. It builds on the Call to Action in Support of Decarbonisation launched in October 2018, which was signed by more than 70 leaders from across the maritime industry, financial institutions and other stakeholders.



Sea Cargo Charter Initiative

In September 2020, Anglo American joined the Sea Cargo Charter initiative as a founding signatory. The charter establishes a standard methodology to allow charterers to measure and align their emissions from ocean transportation activities, while ensuring alignment with the International Maritime Organisation's initial strategy to provide a pathway towards a greener future for shipping. Signatories are required to calculate emissions from their ocean freight chartering activities on a yearly basis, following the agreed standard methodology and declaring it to the other members for benchmarking.

Putting crews at the forefront

At Anglo American, we define a sustainable business as one with an enduring purpose in society, and which considers in all its decision-making the many different forms of value that it can deliver for all stakeholders.

As the Covid-19 pandemic has unfolded, the world's seafarers have borne the brunt of restrictions on movement.

We have implemented a series of programmes onboard our chartered fleet – from supplying additional Personal Protective Equipment (PPE), where appropriate, to conducting a mental health and wellbeing campaign to identify and support those affected, and providing care packages to crew members. We are now looking at supporting and safeguarding seafarer rights as a core part of our shipping activities.

As part of the taskforce of maritime stakeholders responsible for developing the Neptune Declaration on Seafarer Wellbeing and Crew Change, we are actively involved in identifying the key action areas to resolve the crew change crisis and to build a more resilient maritime supply chain.

More than 850 companies have now signed the declaration, an important show of commitment and shared responsibility.

While there are undoubtedly headwinds to navigate, by taking collective action now, we can gain a common understanding of the challenges the sector faces, the opportunities ahead, and the solutions that will prove most effective in driving a more sustainable future, decarbonising the industry and our own value chains, and in meeting the world's net zero ambition.



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