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REPORT NOVEMBER 2026

Scaling *Green Iron Trade*

Why and how governments must act

Authors:
Adam Cooper, Laith Whitwham

ABOUT E3G

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We drive systemic action on climate by identifying barriers and constructing coalitions to advance the solutions needed. We create spaces for honest dialogue, and help guide governments, businesses and the public on how to deliver change at the pace the planet demands.

www.e3g.org

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@e3g.bsky.social

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AUTHORS

Adam Cooper is a Policy Advisor in E3G's Clean Economy team, working on the international politics and policies required to transition heavy industries to net zero pathways.

Laith Whitwham was Programme Lead, Global Industry in the Clean Economy team until October 2026.

ACKNOWLEDGEMENTS

The authors would like to thank all those who provided their valuable input and support to this report in various ways. First and foremost, thanks go to the representatives of organisations who were interviewed as part of this report, for the generosity with which they shared their time and insight. This feedback was essential to the work. Thanks in particular go to Richard Carcenac, Prabodha Acharya and Will Hall for their feedback. The views represented in this paper are the authors' own.

We would also like to thank Daniel Hutchins for editorial support, and Danièle Gibney for editorial and publication support. Thanks also go to Johanna Lehne, Mark Hagen and Ellie Belton for their critical contributions.

Table of contents

Executive summary **4**

Introduction **8**

Green iron trade *can* transform the global steel sector 8

Trading green iron can lower costs for steelmakers 9

The role of government in green iron trade 10

Chapter 1: The need for government **11**

1. Projects need enough demand certainty throughout the supply chain 11

2. Projects need access to finance at the required scale and risk profile 13

3. Projects need predictable access to enabling infrastructure, resources, and skills 15

4. Projects need fair, efficient, and predictable trading relationships 17

5. Green iron production must create acceptable outcomes for local systems 19

6. Supply-chain transformation risks must be actively managed 21

Chapter 2: Six recommendations for governments **23**

1. Aggregate and convert demand into a bankable supply-chain signal 24

2. Reduce specific risks and mobilise, coordinate and supplement finance 26

3. Coordinate infrastructure, resources and skills around a common project pathway 28

4. Build predictable and diversified routes to market 29

5. Represent, protect and create value for local systems (producers) 31

6. Manage supply chain transformation risks (importers) 33

Chapter 3: Organising for government delivery **35**

Establish an overarching strategic objective 35

Translate the objective into institutional mandates and decisions 37

Break down institutional silos around real projects 39

Chapter 4: Connecting systems across borders **40**

Aggregate demand and make standards work across borders 41

Coordinate project finance across national and international institutions 42

Connect finance to infrastructure and national development plans 43

Build trade partnerships around market access, resilience and fair value 45

Building a green iron partnership 46

Executive summary

Green iron can transform the global steel sector

The modern economy runs on steel. That ubiquity comes at a considerable environmental cost: **steel production is responsible for 7–9% of the world's greenhouse gas emissions**.

There is growing interest in replacing coking coal in iron ore reduction with green hydrogen to produce **low-emissions "green iron"**.*



The most emissions-intensive stage of steel production is iron ore reduction. This is the chemical process by which oxygen is removed from iron ore to produce the base metal used in steelmaking.

Using green iron in an electric arc furnace (EAF) powered by clean electricity would **reduce emissions from over 2 tonnes of CO_2 per tonne of crude steel to near-zero levels**.

Green iron production is hydrogen-intensive. Access to abundant, **low-cost renewable electricity is a major determinant of competitiveness**.

Countries with far higher electricity prices, grid constraints, and a lack of quality ore deposits – such as the UK, Germany, Japan, and South Korea – could **benefit from importing green iron**.



Green iron trade could therefore work via two routes. **1** Existing ore exporters, such as Brazil and Argentina, could move further up the value chain. **2** Energy- and logistics-rich hubs, such as Oman, could import iron ore for processing and reduction, before exporting green iron onwards to steelmakers.

Agora Industry estimate that, depending on the source region, **integrating imported green iron into domestic steelmaking could reduce steel production costs in countries like Germany by 12–15% by 2040**.

***Note:** * Green iron is best understood as an emissions and product outcome, rather than a single technology. Hydrogen-based direct reduction is the most advanced route to that outcome today, and hot briquetted iron (HBI) the most readily traded form. However, the appropriate pathway will depend on ore characteristics, energy systems, scale, logistics, and the downstream steelmaking configuration.*

Investment is happening...

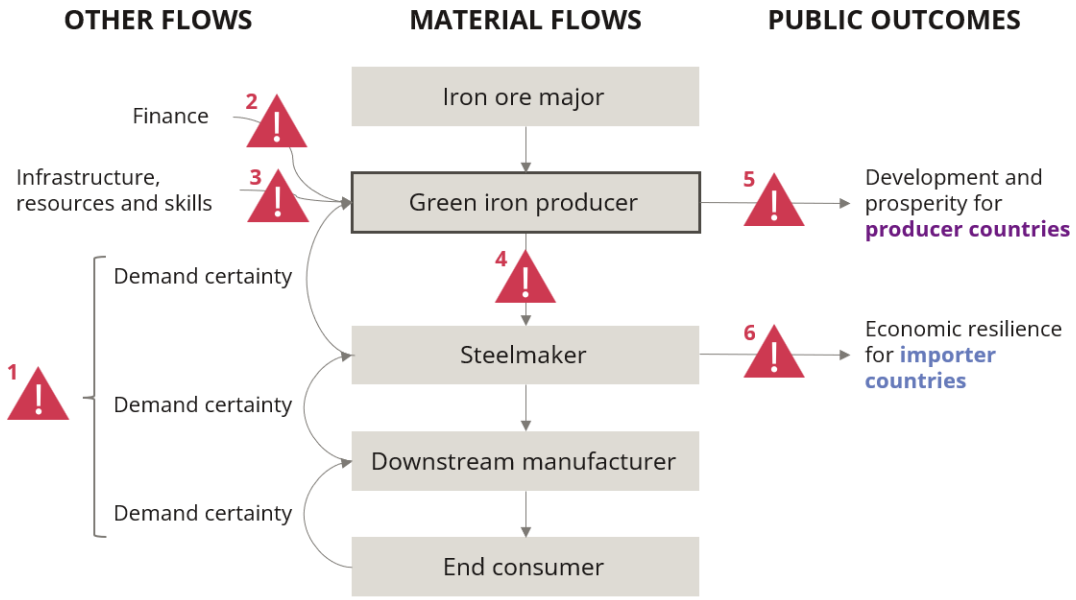
In 2026, the world's first green iron projects are already moving to industrial deployment. Namibia's Oshivela/HyIron project began operations in 2025 with an annual capacity of around 15,000 t of green iron. The project was supported by a €13 million investment from the German government. In Sweden, Stegra's much larger integrated hydrogen-based iron and steel facility in Boden will produce 2.5 Mt of green steel per year once fully operational.

... but government intervention is needed

The right institutional support has been a catalyst to the most advanced green iron projects. **Widespread understanding of how governments should intervene is the difference between the marginal uptake of a niche product and mutually beneficial supply chain transformation.**

E3G conducted extensive interviews with actors across the iron and steel value chain – from well-established industrial players to new market entrants, spanning mining, ironmaking, steelmaking and beyond. This report synthesises insights into the role policy and institutions need to play, alongside the existing body of literature, evidence, and political analysis, into a **practical guide for governments**.

Governments have multiple roles to play in facilitating green iron trade



Six *requirements*		Six *recommendations* for governments	
1	Projects need enough **demand certainty** throughout the supply chain.	1 **Aggregate and convert demand** into a bankable supply chain signal.	Building and financing projects and connecting them with consumers
2	Projects need access to **finance** at the required scale and risk profile.	2 **Reduce specific risks** and mobilise, coordinate and supplement finance.	
3	Projects need predictable access to enabling **infrastructure**, **resources**, and **skills**.	3 **Coordinate infrastructure resources and skills** around a common project pathway.	
4	Projects need fair, efficient and predictable **trading relationships**.	4 Build **predictable and diversified routes** to market.	
5	Green iron production must create acceptable outcomes for **local systems**.	5 Represent, protect and create **value for local systems** (producers).	Making green iron trade work for importers and exporters
6	**Supply-chain transformation risks** must be actively managed.	6 Manage **supply chain transformation risks** (importers).	

Recommendations for governments (Chapters 1 and 2)

Green iron trade will only develop at scale if projects can be built, financed, and connected with consumers (recommendations 1–4). The resulting supply chains must also deliver benefits to the countries and communities involved. Governments must intervene to make sure green iron trade works for exporters and importers (recommendations 5 and 6).

The figure on the previous page shows where markets fail to achieve these outcomes without government support, leading to the six recommendations for governments.

Organising institutions for delivery (Chapters 3 and 4)

In practice, each recommendation cuts across established institutional boundaries. The following steps make institutional coordination possible, within and across borders.

Establish an overarching strategic objective

- Governments must decide what role they want to play in the value chain; what scale of industry is being pursued; and where this industry should be located. Will they be a green iron producer, consumer or both?
- This provides the political justification for any supply chain interventions, a single vision to coordinate disparate branches of government and a framework for managing trade-offs between outcomes. It also means government can engage prospective developers and financiers around identifiable opportunities, rather than waiting for firms to discover, independently, how far the state is prepared to support them.

Translate the objective into institutional mandates and decisions

- Institutions must contribute to more than one outcome (demonstrated in Figure 3, Chapter 3). To balance these multiple responsibilities, institutions will often need to change their existing ways of working by making provision of public support conditional and adapting their processes or priorities.

Break down institutional siloes around real projects

- Institutions are jointly responsible for the same outcomes (demonstrated in Figure 3, Chapter 3). In producer countries, institutions must combine into one project-delivery function to act as an interface between project and infrastructure plans and government. Institutions in consumer countries must send consistent signals to the supply chain.

Connect systems across borders

Trade changes how the sector is governed: dependencies, incentives and public objectives are split across borders. Therefore, the domestic systems described above need to connect with relevant institutions overseas.

Producer and consumer countries' motivations are not identical. But, if they both establish overarching strategic objectives, they can easily identify areas of overlapping interest. Cooperation must then move beyond broad political alignment to mechanisms capable of:

- Aggregating demand and making standards work across borders.
- Coordinating project finance across national and international institutions.
- Connecting finance to infrastructure and national development plans.
- Building trade partnerships around market access, resilience and fair value.

Introduction

Green iron trade *can* transform the global steel sector

The modern economy runs on steel. A foundational material in virtually every major sector, steel is embedded in transport systems, buildings, machinery, infrastructure, and clean energy technologies. But that ubiquity comes at a considerable environmental cost. **Steel production is responsible for 7–9% of the world's greenhouse gas (GHG) emissions**,[1] roughly double the emissions of aviation and shipping combined.[2] Decarbonising steel is therefore critical to reducing planet-warming emissions.

The most emissions-intensive stage of steel production is iron ore reduction. This is the chemical process by which oxygen is removed from iron ore to produce the base metal used in steelmaking. Around 70% of global steel production uses coking coal as the reducing agent in a blast furnace,[3] locking the sector into industrial-scale coal consumption and significant emissions.

In response, there is growing interest in replacing coking coal with green hydrogen to produce low-emissions "green iron". Electrolysers powered by renewables produce hydrogen, which is used to reduce iron ore into direct reduced iron (DRI). This can be compressed into hot briquetted iron (HBI) and transported long distances, allowing ironmaking and steelmaking to take place in different locations. However, green iron is best understood as an emissions and product outcome, rather than a single technology. Hydrogen-based direct reduction is the most advanced route to that outcome today – and HBI the most readily traded form – but the appropriate pathway will depend on ore characteristics, energy systems, scale, logistics, and the downstream steelmaking configuration.

The climate rationale is clear. **Using green iron in an electric arc furnace (EAF) powered by clean electricity would reduce emissions from over 2 tonnes of CO_2 per tonne of crude steel to near-zero levels.**[4]

[1] Davis, C., Li, Z., Styring, P. et al.. 2025, **Routes to reducing emissions from steel production**, *Nature Reviews Clean Technology,* vol. 1, 890–902

[2] Our World in Data, 2020, **Sector by sector: where do global greenhouse gas emissions come from?**

[3] World Steel Association, 2025, **World Steel in Figures 2025**

[4] BHP, 2025, **Driving Steel Decarbonisation Together: BHP's Progress and Partnerships**

Trading green iron can lower costs for steelmakers

In 2026, the world's first green iron projects are already moving to industrial deployment. Namibia's Oshivela/HyIron project began operations in 2025 with an annual capacity of around 15,000 t of green iron. The project was supported by a €13 million investment from the German government. In Sweden, Stegra's much larger integrated hydrogen-based iron and steel facility in Boden will produce 2.5 Mt of green steel per year once fully operational.[5]

However, to realise green iron's emissions-cutting potential, strengthen resilience, and create local value, it must be cost-efficient enough to attract steelmakers at scale. As green iron production is hydrogen-intensive, access to abundant, low-cost renewable electricity is a major determinant of competitiveness. Domestic access to suitable iron ore provides an additional advantage but is not a prerequisite: iron ore is already a heavily traded commodity.

Green iron trade could therefore work via two routes. First, existing ore exporters, such as Brazil and Australia, could move further up the value chain. Second, energy- and logistics-rich hubs, such as Oman, could import iron ore for processing and reduction, before exporting green iron onwards to steelmakers. RMI estimates that restructuring half of primary steelmaking around green iron could save over US$25 billion a year across ten priority importing countries. That works out at around US$80–125 per tonne of steel.[6]

Conversely, countries with far higher electricity prices, grid constraints, and a lack of quality ore deposits – such as the UK, Germany, Japan, and South Korea – would benefit from importing green iron. Agora Industry estimate that, depending on the source region, **integrating imported green iron into domestic steelmaking could reduce steel production costs in countries like Germany by 12–15% by 2040**.[7]

Oman shows how quickly this geography is already changing. Brazilian mining company Vale has shipped millions of tonnes of iron ore to Sohar, Oman, where it operates a 9 Mt/year pellet plant and 40 Mt/year distribution centre.[8] In a joint venture, Vale and China's Jinnan Iron & Steel are now investing over US$600 million in an iron ore concentration plant in Oman that will process 18 Mt of ore a year into 12.6 Mt of high-grade concentrate from 2027.[9] In Duqm, Oman, India's Jindal Steel has also begun development of two 2.5 Mt/year hydrogen-ready DRI/HBI plants,[10] and Meranti Green Steel is advancing another 2.5 Mt/year hydrogen-ready HBI facility.[11] Vale is also pursuing the

[5] Stegra, 2024, **Stegra and Uniper Enter 6TWh Electricity Agreement**

[6] RMI and Green Hydrogen Catapult, 2024, **Green Iron Corridors: Transforming Steel Supply Chains for a Sustainable Future**

[7] Agora Industry, 2025, **The role of green iron trade in accelerating competitive steel transformation**

[8] Vale, **https://vale.com/en/oman** (website, accessed 29 October 2026)

[9] Vale, 2024, **Vale and Jinnan Steel & Iron Group announce investment in iron ore concentration plant in Oman**

[10] Danieli, 2025, **Jindal Steel orders second hydrogen-ready DRI plant in Oman**

[11] Oman Observer, 2026, **Engineering contract inked for Duqm Green Iron Project**

same "mega hub" model in Saudi Arabia and the UAE.[12] **These investments show that green iron production need not sit in ore-endowed countries alone. Iron ore can be shipped to energy- and logistics-rich hubs for processing and reduction, before HBI is exported onwards to steelmakers.**

Trade, however, changes how the sector is governed: dependencies, incentives and public objectives are split across borders. Enabling infrastructure for ironmaking projects may sit in one country, but demand and industrial benefits in another. Finance may also need to flow across several countries.

The role of government in green iron trade

While the technical and economic literature concerning green iron trade has advanced rapidly, the role of policy and institutions remains comparatively underexplored. To address this gap, **E3G conducted extensive interviews with actors across the iron and steel value chain** – from well-established industrial players to new market entrants, spanning mining, ironmaking, steelmaking and beyond.[13] This report synthesises these insights, alongside the existing body of literature, evidence, and political analysis, into a practical guide for governments, covering:

- Chapter 1: The requirements for green iron trade, and why **private markets cannot meet them alone**.
- Chapter 2: Six recommendations for governments to meet these requirements.
- Chapter 3: How governments should organise to deliver these recommendations.
- Chapter 4: How governments should collaborate to deliver these recommendations.

These questions matter: the prize is reduced costs, economic development, supply chain security, and a safer climate. E3G spoke to supply chain actors already committing capital and resources to green iron – many of whom are confident in its potential. The right institutional support has been a catalyst to the most advanced green iron projects. But these ideal institutional conditions are rare – despite the role green iron can play in achieving political objectives. **Widespread understanding of how governments should intervene is the difference between the marginal uptake of a niche product and mutually beneficial supply chain transformation.**

[12] Vale, 2022, **Vale signs agreements to develop Mega Hubs in the Middle East and provide decarbonization solutions for steelmaking**

[13] E3G interviewed c. 10 organisations between June and August 2026 about their existing and planned activities within green steel supply chains. These organisations' views have been synthesised and anonymised. Interviewees were invited to share details about: where they believe governments need to intervene in green steel supply chains; where they have interacted with governments productively; and what successful interaction with governments has depended on. This provided a whole-supply-chain view of the role of government in supporting green iron trade.

Chapter 1: The need for government

Green iron trade will only develop at scale if projects can be built, financed, and connected with consumers. To maintain political and social support, the resulting supply chains must also deliver benefits to the countries and communities involved. Interviews conducted by E3G identified **six recurring requirements** for this to happen. Some relate to the commercial viability of green iron projects, while others concern the trade and resilience conditions needed for a durable market.

Governments are particularly important in green iron trade because production and consumption are not only novel but sit across different jurisdictions. Infrastructure may need to be built in one country, while demand is created in another, and finance assembled across both. The incentives for individual companies, therefore, do not necessarily reflect wider interests in economic development, supply chain resilience, environmental protection, or distribution of value. Here there is a clear role for governments.

Figure 1 shows where these **six requirements** emerge across green iron and steel supply chains. **Chapter 2** sets out six corresponding recommendations for government.

1. Projects need enough demand certainty throughout the supply chain

Prospective green iron producers need confidence that consumers will buy their product before committing billions of dollars to investment in new production facilities. General expectations regarding future demand are not enough to secure projects. The projects that have advanced furthest today tend to have already secured offtake commitments for their product. Stegra, for example, have secured long-term supply agreements from Volvo Group, IKEA, and others for the steel produced in their Boden green iron and steel plant.[14]

[14] Stegra, 2023, **H2 Green Steel collaborates with Volvo Group for supply of near zero emissions steel**

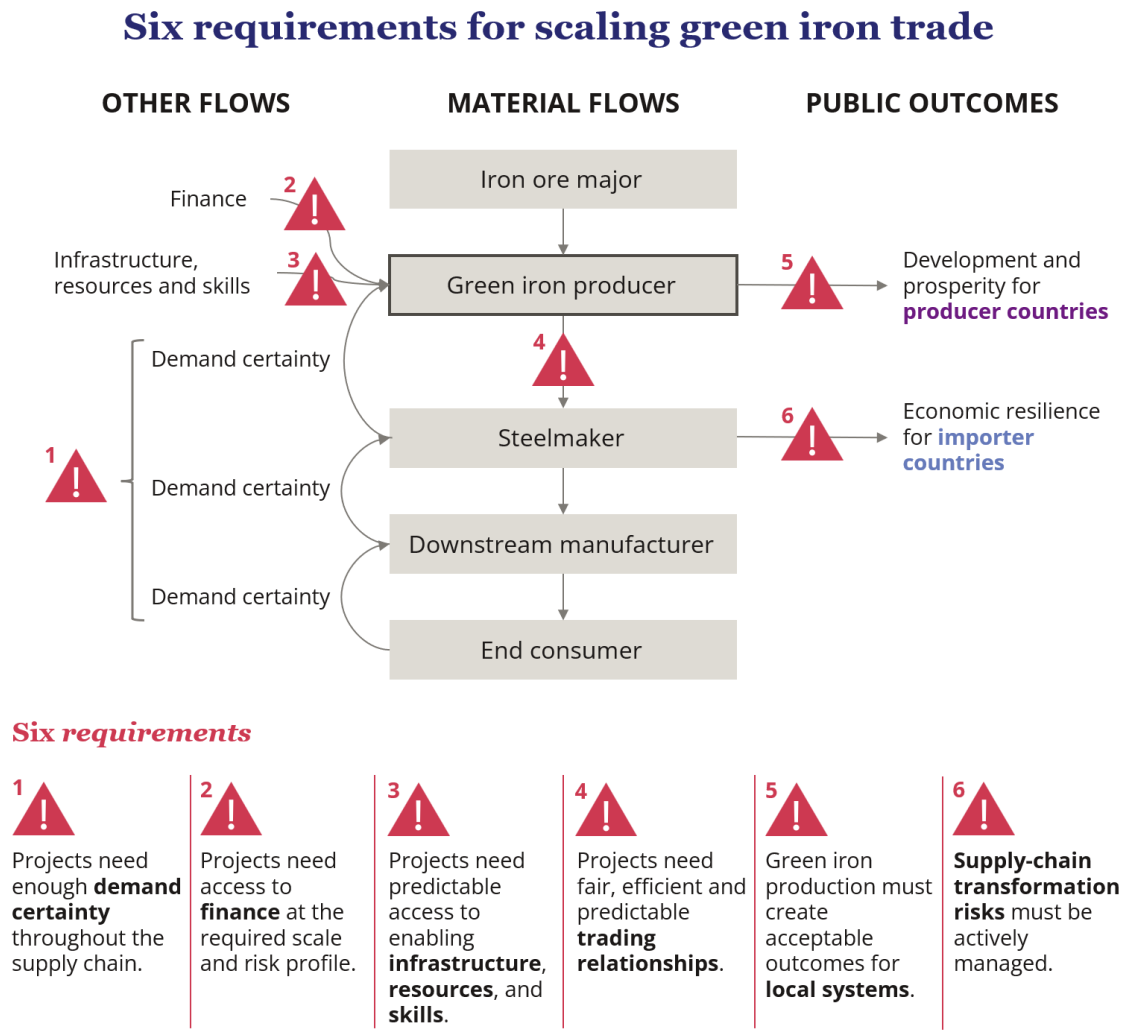


Figure 1: Six requirements emerge across green iron and steel supply chains that must be fulfilled to develop green iron trade at scale. Recommendations against these requirements are set out in Chapter 2.

Willingness to pay

E3G's interviews found broad confidence that demand for low-emissions iron and steel will grow. Early lead markets already exist, particularly among companies willing to pay a premium for lower-emissions materials. These premiums should also narrow as technologies mature, production scales, and supply chains develop. Until then, however, early projects depend disproportionately on consumers willing to pay more for lower-emissions products. Several interviewees identified a subset of European consumers as an important early lead market on which many first projects rely. However, this willingness to pay is uneven, and premiums remain significant with green iron production in its infancy. The challenge, therefore, is that *prospective* demand does not mean consumers will act early or at scale. A critical mass of downstream purchasers must turn stated preferences into real purchasing decisions before production costs have fallen.

Making commitments

This requires reconciling conflicting time horizons across the value chain. An auto manufacturer may only want to purchase low-emissions steel through short contracts. Its steel supplier may therefore be unwilling to commit to a 10–15-year offtake agreement with a green iron producer. The green iron producer, however, may need precisely that level of long-term certainty to secure finance for its project. Interviewees described the difficulty of reconciling the certainty green iron producers and their financiers need with the level of commitment firms downstream can commercially provide.

The nascent nature of green iron markets also poses additional challenges. Near-zero emissions iron introduces new requirements on emissions and performance. As the same iron product cannot be used in every steelmaking configuration, producers will need to understand what steelmakers require before plants are designed. Meanwhile, steelmakers need sufficient information to judge whether future products will meet their needs. A small number of early offtake commitments from first-mover consumers will not create enough demand to transform global iron and steel supply chains.

A common language for products

Market development therefore also requires consistent language for describing product characteristics and emissions performance. This will be essential in allowing steelmakers to communicate what they need. It also means producers can invest against those requirements.

▶ The requirement

Green iron projects *need* strong, coherent demand signals from end consumers to steelmakers to green iron producers, even where scale and/or competing incentives prevent firms from generating this certainty alone. This includes a credible route to market and sufficiently bankable revenue for early projects.

2. Projects need access to finance at the required scale and risk profile

Even where projects have access to resources and prospective customers, they must still obtain finance on terms that make large-scale investment viable. Green iron projects possess several unique characteristics that can make this difficult. They are capital-intensive; employ technologies that have not been deployed at scale; and depend on infrastructure, demand, and policy decisions that are usually beyond their direct control. Cross-border projects will also face political, regulatory, and currency risks across several jurisdictions.

This finance challenge is further accentuated in emerging markets and developing economies (EMDEs) by the gap between real and perceived risks. Green iron (and other) projects in EMDEs can undoubtedly face very real risks, such as climate, political, currency, and/or other market risks. However, evidence shows the perceived risk of investment in EMDEs is greater than real risks.[15]

The specific risks

It is useful to distinguish these risks from collective uncertainty. They include:

- **Technology and performance risk,** particularly for first-of-a-kind (FOAK) technologies and/or processes.
- **Infrastructure risk,** where a project's operation depends on power, hydrogen, water, and/or port infrastructure being completed on time.
- **Demand and offtake risk,** where revenues depend on customers covering a green premium or honouring long-term commitments.
- **Policy and regulatory risk,** where the business case relies on, for example, carbon pricing, subsidies, product standards, and/or market-access rules.
- **Political and currency risk,** where finance may be provided in one currency but deployed in another, leading to increased exposure to exchange-rate fluctuations for project developers and/or cross-border financiers.
- **Interface risk,** where several independent factors in a project or supply chain must be delivered simultaneously for any one of them to succeed/progress.

Private financiers and firms are used to managing and pricing many of these risks. The distinct challenge for green iron projects is navigating these risks amid unfamiliar conditions and dependencies on third parties that neither the investor nor project developer controls.

Scale and mandate

Scale can exacerbate this issue, and some interviewees spoke of prospective projects that were too large for conventional industrial investment funds and/or beyond established models used by infrastructure investors. The problem, therefore, is not necessarily a lack of finance, but a mismatch between project requirements and the mandate or risk appetite of the institutions that may finance it.

For example, a developer may have competitive production costs and a credible steelmaker willing to buy its product, but commercial banks may still be unwilling to provide finance options until completion of a new electricity transmission line is

[15] Global Emerging Markets Risk Database, 2025, **New Statistics from GEMs Consortium Show Risk of Investing in Emerging Markets Is Lower than Commonly Perceived**

guaranteed. A development bank might take on some of this infrastructure risk, but not the demand risk. An export-credit agency, meanwhile, may only support part of the equipment involved. The project thus remains unfinanceable, even though none of these individual risks is necessarily prohibitive.

▶ The requirement

Green iron projects *need* finance suited to their size and risk profile, including coordination between different sources of capital, especially when one institution cannot meet the need alone.

3. Projects need predictable access to enabling infrastructure, resources, and skills

Green iron projects depend on several systems that individual firms and developers cannot provide or control alone. These include large volumes of renewable electricity and hydrogen (and their transmission), water, suitable land, transport networks, port infrastructure, and a sufficiently skilled workforce. Many industrial projects face similar dependencies, but green iron projects combine several at an unusually large scale – especially integrated green iron and steel plants.

Prospective producer countries may have strong renewable-energy potential and access to suitable domestic or imported iron ore, but not yet possess the grid and hydrogen infrastructure required for large-scale ironmaking, or ports needed to process material imports and product exports.

This can be particularly challenging in EMDEs, where public and private spending is constrained and/or infrastructure investment has been historically low.

Power

Clean power and green hydrogen infrastructure are particularly important. Green ironmaking requires large quantities of electricity, both directly and to produce hydrogen. A project may therefore depend on new generation, transmission capacity, grid connections, electrolysers, and potentially shared hydrogen infrastructure. Additional hydrogen storage and pipelines may also be necessary. Decisions over the allocation of scarce grid capacity can dramatically affect project economics. Meanwhile, hydrogen and electricity infrastructure itself often require long-term demand guarantees, which an emerging green iron sector cannot yet provide. Opaque or unpredictable allocation processes compound this problem by making it difficult for developers to estimate costs, timelines, or even whether the power required by a project will be available.

Water

Water can also become a binding constraint (and one that has received relatively little attention to date). Interviewees described situations in which assumptions about water availability changed mid-project development, forcing developers to reassess supply. Increasing supply through options such as desalination can require investments that are too large to be absorbed within the project's own financing, creating serious financial issues.

Ports

Ports and logistics are critical to trade and material flows. Export-oriented green iron projects need port infrastructure capable of moving large volumes of material internationally. For energy-hub models, this will also mean handling substantial inbound flows of iron ore as well as outbound DRI/HBI. While project developers may contribute to port upgrades, ports usually serve numerous firms and sectors, or involve investment of an order that requires numerous use-cases. It is not realistic for one green iron producer to finance and operate an entire port system. Where industry does contribute to the development of ports, decisions about ownership and fees can have material impacts on their commercial outcomes, creating an important role for government as mediator.

Land

Land access and permitting are as important as physical infrastructure. Green iron projects require large sites for ironmaking as well as associated renewable power and/or hydrogen production. Developers therefore need clarity on where suitable land is available, how it will be allocated, what environmental requirements apply, how community consultation is carried out, and how long approvals are likely to take once these requirements are met. These processes must be robust to safeguard communities and natural environments, but certainty must still be given to support projects in reaching a final investment decision.

Skills

Skilled workers are key to green iron production and the associated infrastructure build-out. However, construction workers, engineers, and industrial operators may not exist in sufficient numbers in new production regions – particularly EMDEs and industrialising nations. Companies can train their own workforce, but apprenticeships, migration policy, and large-scale retraining are issues of national concern that often provide benefits beyond one individual employer. Interviewees discussed both the advantage of established industrial workforces and the role of labour mobility policies in allowing advanced projects to proceed.

Crucially, it is not enough for these inputs to become available independently: green iron projects need them to arrive in the right sequence. For example, a green iron plant may have affordable clean power supply, but it will not reach final investment decision if its port

upgrade has no delivery date or its hydrogen supplier is still waiting for other industrial-scale off-takers to begin production.

▶ The requirement

Green iron projects *need* predictable, coordinated access to energy, infrastructure, natural resources, land, and skills, all on timelines compatible with their project development schedules.

4. Projects need fair, efficient, and predictable trading relationships

Green iron's economic rationale rests, in part, on locating ironmaking where renewable energy, suitable ore and other inputs make production most competitive, while steelmaking remains distributed. For many projects, realising that advantage depends on moving green iron across borders.

International trade is not novel to steel supply chains. Iron ore, metallurgical coal, scrap, DRI/HBI, and steel itself already move extensively between countries. What would change is the scale and geography of ironmaking and the interaction between trade and a rapidly changing set of industrial, climate, and economic-security policies.

That geography may involve three-country supply chains rather than a producer–importer relationship. RMI finds that, depending on the quality of renewable resources, shipping logistics, and the cost of transporting ore rather than a processed iron product, reduction could take place close to mines or at a secondary location where clean power is competitive.[16] Oman, Saudi Arabia, and the UAE are high-potential secondary green iron hubs located along existing iron-ore trade routes. This can lower production costs and further diversify supply chains, but also creates an additional supply chain interface. Energy hubs need reliable access to suitable ore as well as ports and trading relationships that can handle ore and green iron trade efficiently.

Market access as a project risk

Export-oriented green iron projects need confidence that they can reach prospective customers on predictable terms. Tariffs and steel safeguards, Carbon Border Adjustment Mechanisms (CBAMs), product and emissions standards, certification requirements, local-content rules, customs procedures, and transport costs all affect whether an apparently low-cost location remains competitive for a given target market. Excessive cost or delay in reaching customers can erode the very production advantage that makes a green iron

[16] RMI and Green Hydrogen Catapult, 2024, **Green Iron Corridors: Transforming Steel Supply Chains for a Sustainable Future**

project viable. These trade and industrial policies are also rapidly evolving – especially in Europe, which is currently the main source of demand. This creates added uncertainty.

For example, a project designed to export HBI to Europe will need to model revenue over many years. Uncertainty over how embedded emissions will be calculated under a future CBAM or whether certification developed in the producer country will be recognised in buyers' countries affects the project's commercial strategy and financing.

A web of trading relationships

A growing global market cannot rely on one source of demand. Interviews revealed that many companies have identified the EU as an important, often sole, lead market, but European demand cannot underpin the entire global green iron industry. Producer countries need access to multiple markets if production is to scale and diversify, while importer countries have an interest in avoiding excessive concentration in any one supplier. Interviewees also supported this idea, citing examples in which projects were proceeding on the basis of a strong market pull from South and East Asia.

Scaling production will therefore require a broad web of stable trading relationships between prospective producer and importer countries. That network is not yet mature, so many projects will face uncertain access to markets, undermining their business cases.

Balancing trade-offs

At the same time, "efficient trade" should not simply mean eliminating every condition on imports and exports. Governments may legitimately use trade and industrial policy to prevent carbon leakage, protect against unfair competition, maintain strategically important capabilities, or ensure international partnerships do not undermine other environmental and development objectives in producer countries.

This creates trade-offs. Local-content rules could stimulate domestic production but increase costs for domestic consumers. Safeguards could be designed to protect domestic steelmakers, but inadvertently restrict access to competitively priced low-emissions HBI. Conversely, unrestricted sourcing based on lowest price could create a highly concentrated supply chain, reliance on one provider, or rewards for producers that achieve low emissions while failing to uphold environmental or social standards.

▶ The requirement

Green iron projects *need* market access which is predictable and at reasonable cost, while accommodating environmental, development, and resilience objectives.

5. Green iron production must create acceptable outcomes for local systems

The first four requirements largely determine whether green iron projects can be developed and financed. Commercial viability alone, however, does not determine whether the resulting investment is beneficial for a country or the communities around which production takes place.

This matters because green iron projects may claim huge amounts of resources (ore, energy, water, land, ports) with competing uses. Political and social support, let alone justice, relies on creating domestic value in return for those resources.

Green iron production and development

The upside of green iron trade, if value is captured effectively, is substantial.

> *"For exporters of iron ore, green iron trade provides the opportunity to move up the value chain, increasing value added from local iron ore mining and renewable energy resources. Countries like Brazil and South Africa can unlock the competitive advantages provided by these natural resources and turn them into new industrial strategies. The business case provided by green iron exports may trigger investments in renewables build-out and local infrastructure, create jobs across the value chain and keep more value in the domestic economy."*
>
> **AGORA INDUSTRY**
> **The Role of Green Iron Trade in Accelerating Competitive Steel Transformation, 2025**

For producer countries, particularly EMDEs, this is fundamental to the political and economic case for participation in green iron trade. Countries beneficiating domestically sourced iron ore will move from lower value ore exports to producing and exporting green iron, capturing the economic value of domestic processing. In clean power and logistics hubs, processing imported ore offers an opportunity to capture value from increased processing, port activity, upskilling, tax revenues, and potentially downstream steelmaking. In both cases, the question for government is how much of the resulting value remains in the domestic economy.

The risk of neocolonialism and resource extraction

Local benefits are not guaranteed. **An international firm could be granted preferential access to land, power, and other public resources while creating relatively few domestic benefits.** For example, it may import much of the technology and inputs it

requires, export its product, and repatriate a large share of the profits. This risk of neocolonial models of resource extraction is increasingly being raised by producer countries themselves. In a UN high-level meeting on critical minerals, the Democratic Republic of the Congo warned that "the global energy transition must not become another extractive transition".[17] African leaders have also highlighted how "previous growth models have been predicated largely on export of Africa's raw materials with minimal value addition", calling for the continent to move to higher-value processing and manufacturing.[18] These concerns echo evidence that extractive FDI in Africa has often resulted in export-oriented enclaves with a high import dependence and limited connections to domestic economies.[19]

An alternative project using the same resources could develop local suppliers, train workers, invest in infrastructure available to other industries, and create a platform for further downstream processing. Markets alone do not guarantee one model over the other.

Environmental and social risks

Environmental and social consequences must also be considered. Green iron has a much lower carbon footprint than coal-based ironmaking, but it is not impact-free. Iron ore mining and industrial development affect land, biodiversity, water resources, and local communities. If standards are too weak or poorly enforced, companies that externalise these costs could obtain commercial advantage over competitors operating to higher standards, creating a potential race to the bottom.

Meaningful local consultation

In some contexts, maximising domestic value may justify going beyond employment, taxation, or supplier requirements, to considering local or public participation in project ownership. This can allow producer countries or communities to retain a direct stake in the value generated by assets whose economics depend on nationally controlled resources and public investment. This is also why producer countries may not see green iron exports as an endpoint and instead seek to expand into steelmaking or other higher-value downstream activities. A durable green iron market should not assume that producers will indefinitely accept a fixed role as suppliers of an intermediate product.

Community consultation alone is also insufficient if affected communities have no meaningful route to influence decisions. Interviewees expressed willingness to consult locally, but public institutions must represent and/or empower local communities and translate consultation findings into commitments made by projects and financiers.

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[17] United Nations Transcripts, 2026, **(Plenary) High-level meeting on critical energy transition minerals**

[18] African Union, 2023, **Opening Remarks for The High-Level Opening of the Ministerial Session by H.E. Amb Josefa Sacko Commissioner for Agriculture, Rural Development, Blue Economy and Sustainable Environment at Africa Climate Summit**

[19] UN Trade and Development (UNCTAD), 2005, **Economic Development in Africa Report 2005**

▶ The requirement

Local economic, social and ecological systems depend on green iron production delivering a credible return for the resources and public support it uses. This includes where local interests are not priced into markets or represented in commercial transactions.

6. Supply-chain transformation risks must be actively managed

Green iron trade would alter the geography of iron and steel supply chains, shifting the countries and companies from which steelmakers source their inputs. Steelmakers already manage international supply chains for iron ore, metallurgical coal, scrap, and other inputs, so green iron does not make cross-border dependence new. However, the transition changes the composition and risk profile of those dependencies.

Avoiding supply disruption

Several interviewees expect growing deployment of electric arc furnaces in Europe to constrain high-quality scrap markets, particularly prime grades, from around 2028–30. Some market participants suggest this is not yet fully reflected in current scrap prices and will increase the importance of ore-based metallics, like green iron, in low-emissions steelmaking. It will also improve the economics of green iron inputs relative to increased scrap inputs.

While green ironmakers can capitalise on these shifting market dynamics, early supplies will still be limited, and production costs will be particularly sensitive to the price and availability of clean power and hydrogen. In short, **steelmakers will be moving towards new production routes while the markets supplying some of their key inputs are still developing**.

Managing shifting dependencies

Importing green iron can reduce dependence on fossil fuel inputs while also giving steelmakers access to iron produced in a broader range of countries. This could improve resilience to supply chain disruptions caused by geopolitical events such as the COVID-19 pandemic, the Russian invasion of Ukraine, and the recent conflict in West Asia. However, green iron trade does not *automatically* lead to more resilient supply chains. An importer replacing ironmaking or one concentrated import dependency with reliance on green iron from a small number of suppliers is, in theory, replacing one vulnerability for another.

For example, a European steelmaker could find that importing lower-cost HBI substantially improves the economics of its downstream steel production. If, however, that HBI comes

from one region, disruption to electricity systems, ports, or shipping routes could become material risks to that steelmaker's operations. Procurement teams assess such risks, but the consequences of reduced production and/or profitability extend beyond one firm to downstream manufacturers, workers, and the communities that depend on continuous steel production.

Managing the domestic transition

There are also transition risks regarding the speed at which domestic ironmaking is replaced, which capabilities should remain onshore, and what combination of material imports – notably scrap recovery, domestic DRI production, and HBI imports – is conducive to sustainable industrial capabilities. Firms will make decisions based on their individual circumstances, but no single business has responsibility for the resilience of a national steel sector.

Managing this transition does not necessarily mean preserving all domestic ironmaking. Agora Industry estimate that around 90% of European steel sector employment sits in steelmaking and downstream finishing activities,[20] rather than primary ironmaking. Meanwhile, integrating imported green iron into domestic steelmaking could reduce steel production costs in countries like Germany by 12–15% by 2040.[21] The strategic question for importer country governments is therefore how to capture those gains while managing concentrated transition impacts and new dependencies.

▶ The requirement

Steelmakers' resilience depends on management of new supply chain risks created by changing inputs, production geographies and dependencies. This includes management of risks which have implications beyond individual firms.

[20] Agora Industry, 2025, **The role of green iron trade in accelerating competitive steel transformation**
[21] Ibid

Chapter 2: Six recommendations for governments

Chapter 1 identified **six requirements** for a durable green iron market that private actors cannot realistically meet alone. This chapter puts forward **six corresponding recommendations for government** (Figure 2).

This is not an argument that governments should make every prospective green iron project commercially viable. Companies are responsible for developing competitive projects, managing commercial risks, and deciding where to invest, buy and sell. Government intervention is justified where projects depend on public systems and decisions, coordination failures prevent otherwise viable investments, or commercial incentives do not account for wider economic, social, environmental, or resilience objectives. The objective is to resolve specific barriers and market failures, rather than insulating individual projects from routine commercial risk.

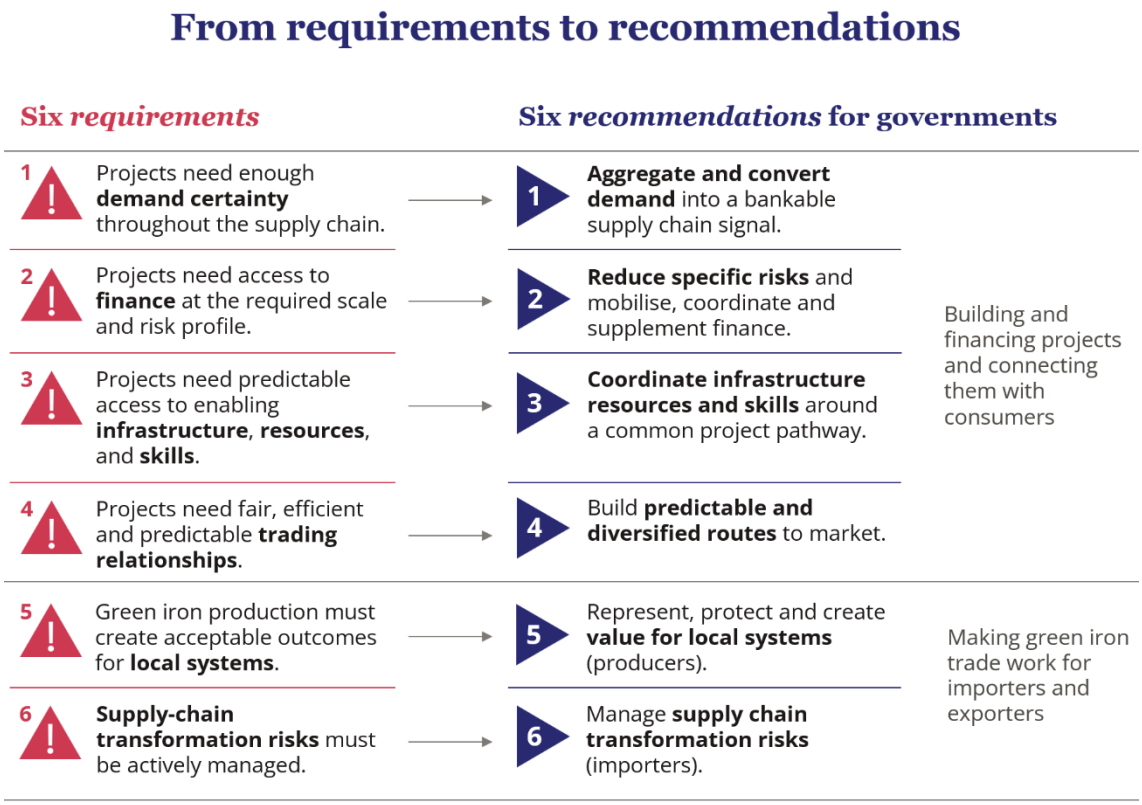


Figure 2: Six recommendations correspond directly to the requirements identified in Chapter 1

It is also not the case that every recommendation requires a new institution or large public expenditure. Some require regulation and strategic direction, while others require the coordination of public infrastructure, finance or procurement. The appropriate tools will vary between countries and projects.

This chapter considers each recommendation in turn. **Chapter 3** examines **how governments should organise** across institutions and departments to perform them coherently. **Chapter 4** considers where delivery depends on **international collaboration**.

1. Aggregate and convert demand into a bankable supply-chain signal

Chapter 1 identifies not just the requirement for demand for green iron and steel to grow, but also for demand to translate into long-term purchasing commitments that green iron projects need to reach final investment decision (FID). A steelmaker or downstream customer may have strong demand for green iron for a contract lasting a few years, but a green iron producer may require a contract on a 10–15-year horizon.

Government can strengthen demand at several points in this chain.

Demand-side policy

The most obvious route is by its own purchasing power. Governments and public bodies are major (though sometimes indirect) consumers of steel via infrastructure, transport, buildings, and other procurement. Green public procurement can therefore create early demand for lower-emissions products and give producers greater confidence that a market will exist before production costs have fully converged with incumbent technologies.

Government can also change incentives for private consumers. Carbon pricing and product requirements can make emissions a more material part of purchasing decisions. Measures like these are particularly important while green iron markets are in their infancy, with products carrying a premium that many consumers may support in principle but will not voluntarily pay at scale.

Producer governments should not look only abroad for demand, even if the majority of domestic production is destined for export. Domestic procurement and product requirements can create an early base market, improve project economics, and support domestic value-chain development.

Standards and emissions-accounting systems

Demand policy also needs to send a coherent signal through the value chain. **A green public procurement requirement for low-emissions steel will only help a green iron project if steelmakers can translate that requirement into the type and quantity of iron they need**.

Standards and emissions accounting systems are therefore crucial in early market creation, as they create a common language for customers to specify what they want, while producers can demonstrate that their product meets those requirements.

This does not require every country to use the same definition of green iron, but governments should create sufficient consistency between procurement criteria, product standards, carbon accounting rules, and other demand-side policies to ensure firms do not receive contradictory signals. The international dimension to standards interoperability is considered in **Chapter 4**.

Demand certainty

Where strong underlying demand signals exist but do not extend to the timescales investment requires, public institutions can also help to close the offtake bankability gap. Offtake guarantees, for example, can cover part of the risk between long-term revenue certainty for producers and the scale of commitment steelmakers can realistically make. Governments should not become permanent customers, nor should they assume unsustainable levels of risk; they should target support for early transactions until a sufficiently mature private market develops.

The trade-off, however, is that policies that increase demand for domestic green iron can support the domestic industry and associated jobs but also increase costs for domestic manufacturers or public purchasers (and thereby taxpayers). Government action should balance these outcomes to create a coherent and durable market signal, not simply maximise demand at any cost.

In practice, governments should:

- Use procurement, carbon pricing, and product requirements to create early demand.
- Align procurement, product, and emissions standards so demand is communicated coherently through supply chains.
- Aggregate demand where individual buyers cannot provide sufficient scale.
- Use targeted, time-limited public guarantees where otherwise credible demand cannot provide revenue certainty needed for FID.

2. Reduce specific risks and mobilise, coordinate and supplement finance

The financing requirement identified in **Chapter 1** is not simply that there is too little capital. Green iron projects can fall between existing finance institutions' mandates, or combine risks that different financial institutions are unable or unwilling to take. A viable financing structure may therefore require several forms of capital and risk-bearing on the part of government to work together.

Distinguishing and allocating risks

Government's first task is to distinguish between risks rather than treating all financing difficulty as an argument for subsidy. Technology risk may justify support for FOAK technology deployment but should diminish as a technology becomes proven. Infrastructure risk may be better addressed by ensuring a grid connection or port upgrade is delivered than by paying a higher subsidy to compensate the project for uncertainty. Political and regulatory risks are most efficiently reduced by changing policy itself. Currency or country risks may require financial instruments. Demand risk may be better addressed through offtake or lead market policy (as above). These risks should be allocated to those best able to manage them.

Crowding in private capital

Public finance can be used *selectively* to crowd-in commercial capital. Different stages and risks may require different instruments, including project-preparation facilities, concessional debt, guarantees, political-risk insurance, foreign-exchange risk instruments, export credit, blended finance, and strategic equity. The appropriate package will differ by project and country.

This is particularly important in EMDEs, where high financing costs can undermine otherwise strong production economics. A location may have cheaper renewable power and reliable access to suitable ore, but struggle to compete if, for example, currency or perceived market risks raise the project's cost of capital substantially. Public institutions can add value by absorbing or reducing those specific risks more efficiently than the project developer.

Coordinating finance

Coordination between financiers is, in itself, also a government role. Reaching FID may require blended finance from sponsor equity alongside a national development bank (NDB) loan, a multilateral development bank (MDB) or public guarantee covering a particular risk, export-credit support for equipment, and commercial lending once those risks have been reduced. Packages involving this number of financiers and firms require active structuring (in collaboration with financiers and industry), especially as different institutions have

different mandates, due diligence requirements, and timelines. Disconnected offers do not automatically become one bankable financing package.

Stegra provides one illustration of a mixed financing structure. The European Investment Bank (EIB) committed €314 million to its Boden project, including €200 million backed by InvestEU and €114 million from participating commercial banks. The Nordic Investment Bank provided a further €57 million. This example demonstrates how public risk-bearing and institutional lending can sit alongside commercial finance in a large FOAK industrial investment.

Stegra illustrates how different sources of finance can be combined around an individual project. Country platforms offer a model for coordinating finance across a pipeline of investments. Türkiye's Industrial Decarbonisation Investment Platform (TIDIP), led by the Ministry of Industry and Technology with the European Bank for Reconstruction and Development (EBRD), and the World Bank Group/International Finance Corporation (IFC), initially covers iron and steel alongside cement, aluminium and fertilisers. It is set to mobilise over €5 billion of investment by 2030 by matching priority investments and projects with financiers. It will combine commercial finance with grants, concessional finance, and risk-sharing instruments, rather than leaving individual project developers to navigate disconnected sources of finance. In short, country platforms provide a country-led structure through which governments, MDBs, and private financiers can develop and finance project pipelines against common objectives.

The objective is not to socialise all project risk. Public finance should be additional, solving specific constraints to enable private investment that would otherwise not occur.

In practice, governments should:

- Identify the specific risks preventing otherwise credible projects from reaching FID.
- Allocate those risks to the public or private actors best able to manage them.
- Deploy guarantees, concessional finance, export credit, equity and other public finance instruments against identifiable constraints.
- Actively structure complementary financing packages across national, international and commercial institutions.

3. Coordinate infrastructure, resources and skills around a common project pathway

Chapter 1 identifies electricity, hydrogen, water, ports, land, permitting and workforce as interdependent requirements whose availability and sequencing can determine whether a project reaches FID.

Again, government's role is not necessarily to own or finance all of these systems, but to ensure projects have a credible, predictable route to accessing them while balancing green iron against other sectors and public outcomes.

Infrastructure planning

This starts with infrastructure planning. Where a prospective industrial cluster will require large, new volumes of clean electricity, hydrogen, and/or water, planning decisions cannot be made on a project-by-project basis without considering the aggregate requirement. Governments, regulators, and public system operators need to anticipate demand, clarify which infrastructure investments will be publicly or privately financed, and establish transparent rules for allocating scarce capacity.

The process for accessing infrastructure must also be predictable. A nominally adequate electricity system is of limited use to a project developer if the process for obtaining a major grid connection is unclear, or if the scheduling of grid connections does not have a clear timetable or rationale. Transparent criteria and credible timelines allow businesses and financiers to model costs and make real investment decisions.

Land and permitting

Land and permitting require a similar balance. Faster permitting can help strategically important projects progress (though acceleration should not mean weakening environmental or consultation requirements, as noted above). The useful government role is to identify suitable development areas, make requirements clear, coordinate the sequencing of approvals, and ensure developers have confidence that compliant projects will receive decisions within credible timelines.

Oman's approach to its green hydrogen sector is a good example of this role. The public agency Hydrom has been given responsibility for planning the sector, identifying, ringfencing, and allocating government-owned land for development.[22] Hydrom also helps prospective developers understand where development can take place and on what terms. The model reduces the burden on individual developers of independently navigating land allocation and related public decisions.

[22] Hrdyom, **https://hydrom.om/** (website, accessed 19 October 2026)

Skills

Skills policy requires similar anticipatory action. Individual businesses can train employees but have neither the incentive nor capability to build an entire regional skills base from which competitors and adjacent industries can also benefit. Governments, however, can work with many firms, educational institutions, unions, and local authorities to forecast workforce requirements and develop vocational education, apprenticeships, and retraining programmes before labour shortages become a binding constraint.

These roles all require coordination. Projects gain little from having land allocated if grid connections only arrive five years later, or from a funded port upgrade if water supply is unresolved. Government needs to ensure that the different systems on which projects depend, but which they do not control, are planned against a common development pathway. How that coordination is organised is considered in **Chapter 3**.

In practice, governments should:

- Anticipate green iron's requirements for power, hydrogen, water, ports, land, and skills as part of wider industrial and spatial planning.
- Identify shared infrastructure and clarify which investments will be delivered publicly or privately.
- Establish transparent criteria and credible timelines for accessing scarce infrastructure, land, and permits.
- Sequence infrastructure, permitting, and workforce interventions against common project development pathways.

4. Build predictable and diversified routes to market

This recommendation sits most clearly at the intersection of commercial markets and public policy. Companies decide where they buy and sell green iron, but governments determine many of the conditions that make those transactions more or less viable.

Chapter 1 identifies tariffs, safeguards, carbon border measures, standards, certification, local-content requirements, and customs arrangements as factors that can alter the economics of a green iron project, even where production itself is competitive.

Shaping trade conditions

Governments cannot directly "manage trade flows", but they have a central role in shaping the rules and incentives within which trade takes place, so viable green iron projects have predictable routes to market while wider climate, development, and resilience objectives are protected.

For producer governments, this includes understanding which markets are strategically important to domestic projects and whether national standards, certification, or trade arrangements enable access to them. A producer that is competitive on a production cost basis may still struggle to reach FID if investors cannot predict the treatment its products will receive in key importing markets.

For importer governments, the challenge is to allow lower-cost clean inputs to support domestic steelmaking without undermining environmental, industrial, or economic-security objectives. Poorly designed safeguards or local-content rules can prevent steelmakers accessing cost-effective green iron.

For energy hub producers that rely on imported ore, market access runs in both directions, as projects need secure, competitive access to suitable ore as well as predictable routes for exporting DRI/HBI.

Carbon policy increasingly forms part of this trading environment. For example, the EU's CBAM came into effect in January 2026 and covers iron and steel. The CBAM requires importers to account for embedded emissions by purchasing certificates linked to the EU Emissions Trading System (ETS) carbon price. That makes the measurement and verification of emissions a material part of market access for prospective green iron exporters to the EU.

Beyond lowest-cost sourcing

The aim should be predictability and coherence rather than liberalisation for its own sake. A well-functioning market should contain important safeguards and environmental conditions designed in ways that support rather than hinder the transition to lower-emissions supply chains.

Unrestricted lowest-cost sourcing can create new concentrations of supply or favour products that meet carbon requirements while falling short of wider environmental or social standards.

Governments may decide that resilience justifies diversification across several producers, even where the lowest-cost outcome would create greater concentration. Similarly, producer countries would benefit from access to several importing markets rather than dependence on a single lead market. These choices sit partly outside ordinary firm-level decisions based on cost, as the benefits accrue to a wider economy or country.

Crucially, most trade issues require governments on both sides of a transaction to cooperate, for example on standards interoperability, carbon accounting, market access, and strategic partnerships. **Chapter 4** examines these cross-border mechanisms in detail.

In practice, governments should:

- Identify the import and export relationships most important to their industrial strategy – including access to suitable ore where required – and provide predictable routes to market.
- Minimise avoidable friction from tariffs, safeguards, customs, certification, and other trade rules while preserving legitimate climate, development and resilience objectives.
- Work towards interoperable emissions accounting, standards, and carbon border arrangements (especially with priority markets/trade partners).
- Deliberately diversify suppliers and customers to avoid replacing existing dependencies with new concentrations of supply or demand.

5. Represent, protect and create value for local systems (producers)

Markets will identify whether green iron and steel projects are profitable or provide sufficient value across a given supply chain. Markets will not, however, price in negative externalities, ensure that whatever positive benefits they do generate spill over into local communities, or provide a fair deal to a country/population in return for allocation of land, water, power, and public resources.

Governments represent interests that are either weakly represented or not represented at all in commercial transactions.

Protection and representation

The first responsibility is protection. Low carbon emissions do not remove the environmental and social impacts associated with mining, industrial development, infrastructure expansion, and iron and steelmaking. Governments should establish and enforce minimum standards on land, water, biodiversity, labour, and human rights so firms that externalise these costs cannot gain a competitive advantage over more responsible producers.

Governments must also set the process that ensures consultation translates to influence. Project developers may consult communities voluntarily, but governments and other legitimate public institutions are needed to establish whose views must be heard, how affected populations are represented, and how findings alter permitting requirements, project design or the conditions attached to public support. This is particularly important where bargaining power between an international project developer and a local community is highly unequal.

Fair returns on public support

Government must also decide what constitutes a fair return for access to nationally controlled resources and public support. That return might include tax receipts, guaranteed jobs, workforce training, supplier development, infrastructure for other businesses and communities (that would otherwise have no business case), investment in the energy system, community-benefit arrangements (including public infrastructure from roads to parks), or requirements that support further domestic processing.

Where public resources make a particularly large contribution to project economics, governments should also consider local or public participation in ownership. Equity participation or joint ventures are not always appropriate, but can provide a mechanism for retaining a direct share of the value generated by nationally controlled resources and publicly enabled assets.

Strategic government intervention

Public support can be made conditional on these outcomes. For example, access to scarce power or public finance could be tied to investment in shared infrastructure, workforce development, or agreed environmental standards. The purpose of conditionality should be to secure defined public benefits, rather than simply add requirements that undermine the project's competitiveness.

This recommendation also has a strategic dimension: producer countries may see green iron as a step towards further industrial development, rather than a permanent endpoint in the value chain. Policies and partnerships should leave space for countries to deepen domestic processing and eventually enter higher-value stages where that becomes economically feasible. For example, the Oshivela/HyIron project has mobilised support for green hydrogen and green ironmaking, but explicitly targets wider development of green value chains within Namibia.

In practice, governments should:

- Define the public value expected in return for access to land, energy, infrastructure, and public finance, and attach measurable conditions to that support.
- Establish and enforce environmental, labour and social safeguards.
- Ensure affected communities have meaningful representation and influence over project decisions.
- Use tools including workforce and supplier development, shared infrastructure, taxation, benefit-sharing and, where appropriate, public or local ownership to retain more value domestically.

6. Manage supply chain transformation risks (importers)

Companies should be responsible for managing their supply chains. Governments neither have the information nor mandate to decide which supplier a steelmaker should use. However, the consequences of supply chain transformation extend beyond individual firms.

As **Chapter 1** sets out, green iron trade will change the combination of scrap, ore-based metallics and domestic iron a country's steel sector uses. It can create new import dependencies and affect the viability of industrial capabilities on which downstream manufacturers and regional economies depend. Individual firms should be held accountable for their impact on system-wide outcomes, but they are not responsible for *managing* them.

Strategic risk management

Governments should provide strategic direction for industry-led risk management. For importer countries, this starts with understanding the likely future balance between domestic ironmaking, imported green iron, and scrap; which downstream manufacturing capabilities they seek to maintain; and what forms of supply concentration would create unacceptable exposure.

This does not require prescribing a fixed national material mix, but does require explicitly identifying risks that individual commercial decisions may collectively create. This vision can be articulated in national iron and steel or industrial strategies and sector pathways, with incentives designed in accordance with that strategy's outcomes.

Transition planning

Shifting some ironmaking abroad need not amount to wholesale deindustrialisation, with steelmaking and finishing generally providing far more jobs than primary ironmaking. Moreover, lower steelmaking costs should support the competitiveness of downstream manufacturing jobs. However, national figures can disguise acute local effects given iron and steelmaking tend to be geographically concentrated**.**

Governments therefore must consider industrial and workforce transition planning alongside decisions about the future supply chain, rather than treating employment and regional effects only after commercial restructuring has taken place.[23] This is different to asking firms to maintain uneconomic production; it is about recognising social and economic consequences that no single firm has an incentive or mandate to manage for society as a whole.

[23] E3G, 2026, **Europe's industrial renewal needs local and regional foundations**

Emerging examples of strategic risk management

The UK Steel Strategy

In 2025, the UK government commissioned the Materials Processing Institute (MPI) to assess how the UK should secure the primary iron needed as its steel sector shifts towards electric arc furnaces. MPI concluded that UK steelmakers could initially source primary iron through established international markets, but warned that reliance on emerging green iron corridors raises questions around security of supply and national sovereignty. It also found a potential strategic case for domestic DRI production, but that its competitiveness would heavily depend on UK energy prices. The subsequent UK Steel Strategy leaves open a mixed pathway: imports could meet near-term requirements while the government explores domestic hydrogen DRI capability and new green trading partnerships with reliable, competitive partners. This recognises that resilience does not require absolute self-sufficiency but can be strengthened by combining domestic capability with access to international supply.

What the UK Steel Strategy does not do, however, is set out how these prospective projects would access land, power, and hydrogen infrastructure, how public finance incentives would be offered to support this transformation, or how workers affected by a shift away from primary ironmaking would be retrained and supported into new employment. Governments should bring these interventions together into a delivery pathway showing how domestic capacity and diversified international supply would develop in parallel.

In practice, governments should:

- Assess future requirements for domestic ironmaking, imported green iron, scrap and other metallic inputs.
- Stress-test those supply chains and identify strategically important capabilities and unacceptable concentrations of supply.
- Plan early for workers and regions affected by industrial restructuring.

Chapter 3: Organising for government delivery

Chapters 1 and 2 identify the requirements for green iron trade to develop at scale and put forward six corresponding recommendations for governments to address those requirements. In practice, each recommendation cuts across established institutional boundaries, so **governments must coordinate internally and with other governments** to deliver them. For example, demand policy can involve procurement, industry, and finance ministries; infrastructure decisions may span energy, transport, and planning institutions; and decisions on trade, economic security, and local value will likely cut across all of them.

Policies designed to solve one problem can also create difficulties elsewhere. Cheap power, for example, can improve a green iron project's economics but divert capacity from other users; green or local content requirements in public procurement can strengthen demand and employment, but increase public costs.

Beyond a mere list of interventions, governments need a way of establishing priorities, translating them into mandates for individual institutions, managing trade-offs, and coordinating delivery around real projects. This chapter sets out three requirements for doing so:

1. Establish an overarching strategic objective.
2. Translate the objective into departmental mandates and decisions.
3. Break down institutional silos around real projects.

Chapter 4 then considers where domestic systems need to connect across borders.

Establish an overarching strategic objective

Before governments can take decisive action, they must establish a shared understanding of the changes taking place in iron and steel supply chains and the implications for domestic outcomes. From this position of understanding, they must **decide what role they want to play in the value chain**; **what scale of industry is being pursued**; and **where this industry should be located**.

A prospective producer country could be moving upstream from iron ore exports to increase the share of processing undertaken domestically, while another may see green iron as a route into an entirely new industrial sector. A prospective importer country might focus on importing green iron to diversify its material dependencies and strengthen its downstream steel sector. It could include a desired level of preservation of domestic steel

or manufacturing capabilities, and/or a managed transition from some domestic high-emissions ironmaking.

A country may pursue several of these objectives at once. The key point is that governments must articulate the configuration of public outcomes they are trying to achieve, against which different policy choices will be made (see Table 1).

Table 1: Illustrative examples of strategic objectives.

Strategic objective	Supply chain outcome	Public outcome
Green iron producer (e.g. Oman, Brazil)	**Content:** "Establish XX Mt of new green iron production by 2035." **Impact:** Coordinates departments around delivering **recommendations 1, 2, 3 and 4**.	**Content:** "Boost exports by $XX and jobs by XX, and attract $XX private investment into domestic infrastructure." **Impact:** Makes delivery of **recommendation 5** a priority for all departments.
Green iron consumer (e.g. Germany, Japan)	**Content:** "Establish XX Mt of competitive electric steelmaking by 2035, supported by domestic scrap plus XX Mt new green iron imports." **Impact:** Coordinates departments around delivering **recommendations 1, 2, 3 and 4**.	**Content:** "Manage the pace and nature of industrial restructuring to maintain XX jobs in targeted regions and avoid economic dislocation." **Impact:** Makes delivery of **recommendation 6** a priority for all departments.

The benefits of strategic direction

This overarching objective is broader than any one of the six recommendations in **Chapter 2**. Rather, it provides the political justification for any supply chain interventions, a single vision to coordinate disparate branches of government, and a framework for managing trade-offs between outcomes.

It is also important because government intervention itself creates political risk. As green iron investment decisions depend heavily on shared infrastructure, public finance, procurement policy, and trade rules, uncertainty over government priorities can materially alter projects' economics. Politically durable commitments can reduce some of this uncertainty if they have political authority. Whether an executive order, industrial strategy, sector pathway, or formal government commitment, objectives must be backed at senior political level, so departments know it is a collective government priority – not the preference of one ministry.

Governments can also be proactive rather than waiting for firms to bring fully formed proposals forward. An industrial strategy can trigger an assessment of where domestic production is economically and strategically attractive, what infrastructure would be needed and which gaps prevent investment. **Government can then engage prospective developers and financiers around identifiable opportunities, rather than waiting for firms to discover, independently, how far the state is prepared to support them.**

Translate the objective into institutional mandates and decisions

An overarching objective has little value if it does not change day-to-day decisions. Multiple branches of government need to understand their contribution, how they fit into existing plans and commitments, and how they complement the roles of other institutions.

Figure 3 provides a tool to guide this process. The six recommendations form the top horizontal axis; the relevant public institutions form the vertical axis. The matrix overall identifies where responsibility sits, where institutions need to contribute to the same outcome and where gaps or contradictory incentives exist. An adapted version in **Chapter 4** highlights where international coordination is needed.

The six recommendations: Institutional responsibilities

Recommendations ▶ / Public institutions ▼	1 Bankable supply-chain signal	2 Risks & finance	3 Coordinate around common pathway	4 Routes to market	5 Local value (producers)	6 Manage supply chain risks (importers)
GREEN IRON PRODUCER						
Energy system			◎		◎	
Workforce			◎		◎	
Land use			◎		◎	
Ports			◎		◎	
Water			◎		◎	
Business liaison			◎		◎	
National public finance	◎	◎	◎		◎	
Trade				◎	◎	
Business standards	◎				◎	
Procurement	◎				◎	
GREEN IRON CONSUMER						
Trade				◎		◎
Business standards	◎					◎
Procurement	◎					◎
Development		◎	◎			◎
International public finance	◎	◎	◎			◎
Economic security						◎

Figure 3: Green iron government matrix

Identifying and managing multiple responsibilities

The rows in Figure 3 show where **institutions must contribute to more than one outcome**. An energy ministry or system operator needs to support projects to access the volumes of power they require, but must also balance this requirement against national industrial and energy system priorities. Public finance institutions need to balance supply, development, and resilience outcomes through their interventions. Procurement and standards bodies need to stimulate the green iron and steel supply chain to support domestic outcomes. Trade officials need to understand both the market access domestic firms need and the industrial capabilities the government wants to protect from international competitors.

To balance these multiple responsibilities, institutions will often need to adapt their existing ways of working in two primary ways:

1. **Conditional provision.** Departments can continue to provide infrastructure access, finance, or other forms of support while attaching conditions on firms' behaviour that ensure public benefits are realised. Access to scarce power or public finance, for example, could be linked to investment in shared infrastructure, workforce development, environmental performance, or other outcomes established through the national strategy.

2. **Adapting processes or priorities.** Existing institutions may need to change how they assess opportunities where green iron contributes to the wider strategic objective. A public finance institution might prioritise projects that strengthen a strategically important supply chain or enable wider infrastructure investment. Planning institutions may give strategically important projects clearer routes through existing processes (without weakening environmental safeguards). Procurement bodies may amend purchasing criteria so their demand reinforces the same emissions and product standards being promoted by industry policy.

Neither approach means subordinating every objective to increasing green iron supply. This process simply makes competing objectives visible, allowing departments to assess and amend policy against these objectives.

Governments then need an executive function capable of resolving trade-offs that cannot be settled within individual departments. The institutional form will differ between political systems; what matters is that disagreements can be escalated and resolved against overarching objectives, rather than producing contradictory policies by default.

Because pathways will change as technologies and markets develop, governments also need a mechanism for revisiting their objectives and managing trade-offs collectively, rather than treating initial strategies as fixed.

Break down institutional silos around real projects

The columns in Figure 3 show where **institutions are jointly responsible for the same outcomes**. As green iron projects are large, novel, and highly dependent on public systems, **even a well-designed national strategy can fail if separate institutions fail to coordinate with each other**.

Project partnering

For example, in prospective producer countries, various institutions should view their contribution as part of a common project that includes the green iron producer. This includes energy, workforce, land-use and planning authorities, ports, water providers, and national public finance institutions. The objective should be project partnering rather than parallel government support.

Some interviewees showed a strong preference for a central business-liaison or project-delivery function to act as an interface between project and infrastructure plans and government. This does not necessarily require new institutions: an existing industry ministry, investment agency, or other public body could perform this role where it has the mandate and authority. But whatever the interface, to be genuinely useful it must understand the roles of specific departments, be able to triage any problems, provide predictable information to project developers, and maintain a channel into government capable of changing decisions or sequencing when new information emerges.

This is particularly important because lessons will be learned as FOAK projects develop. Infrastructure requirements may change, forecasts of water or power supply and demand may prove inaccurate, financiers may identify new or underestimated risks, and new technical specifications may alter what customers require. Government departments should be able to come together, understand what has changed and adapt their collective support, rather than allowing a coherent package to degrade into an illogical tangle of separate policies.

Stimulating supply

The same principle applies to importer countries, although the institutions and interventions may differ. For example, procurement, standards and public finance institutions should build a shared understanding of what supply is needed. This could include target emissions profiles, product specifications, required volumes, and acceptable levels of supplier concentration. Governments then need to ensure the signals they send are consistent. Standards should define what consumers demand, procurement should reinforce that demand, and public finance should support projects capable of meeting it.

Chapter 4: Connecting systems across borders

Strong domestic organisation can resolve many of the barriers identified in previous chapters, but scaling green iron trade involves investment in a value chain that sits across borders. Producer governments, for example, may control land and infrastructure, but demand may sit abroad. Importer governments may control trade policy or support private offtake agreements, but rely on projects in other jurisdictions.

Moreover, producer and consumer countries' motivations are not identical. Producer governments may prioritise investment, domestic value creation, infrastructure development, and reliable access to export markets. Importer governments may prioritise lower-cost clean inputs, diversification, emissions reduction, and the resilience of downstream steelmaking. International partnerships are needed to ensure these objectives are compatible, rather than assuming each side will pursue green iron production or trade for its own sake.

The domestic systems and actions described in **Chapters 2 and 3** therefore need to connect with relevant institutions overseas. This is not to say that international collaboration is a substitute for national policy or project delivery. Rather, it provides a mechanism through which domestic systems can address dependencies that sit beyond their borders, align complementary industrial objectives and coordinate the institutions needed to move real projects towards investment.

The form this takes will differ between countries. Some partnerships may centre on one prospective project or trade corridor; others on a wider pipeline of infrastructure and industrial investment. They may build on existing trade agreements, strategic partnerships, country platforms, or development finance relationships, or require an entirely new institution. What matters is that cooperation moves beyond broad political alignment to a mechanism capable of solving identifiable barriers to investment and trade.

This chapter outlines **four key areas for international partnerships**, shown in Figure 4:

1. Aggregate demand and make standards work across borders.
2. Coordinate project finance across national and international institutions.
3. Connect finance to infrastructure and national development plans.
4. Build trade partnerships around market access, resilience and fair value.

The chapter concludes with an indicative roadmap for building a green iron trade partnership.

The six recommendations: International partnerships

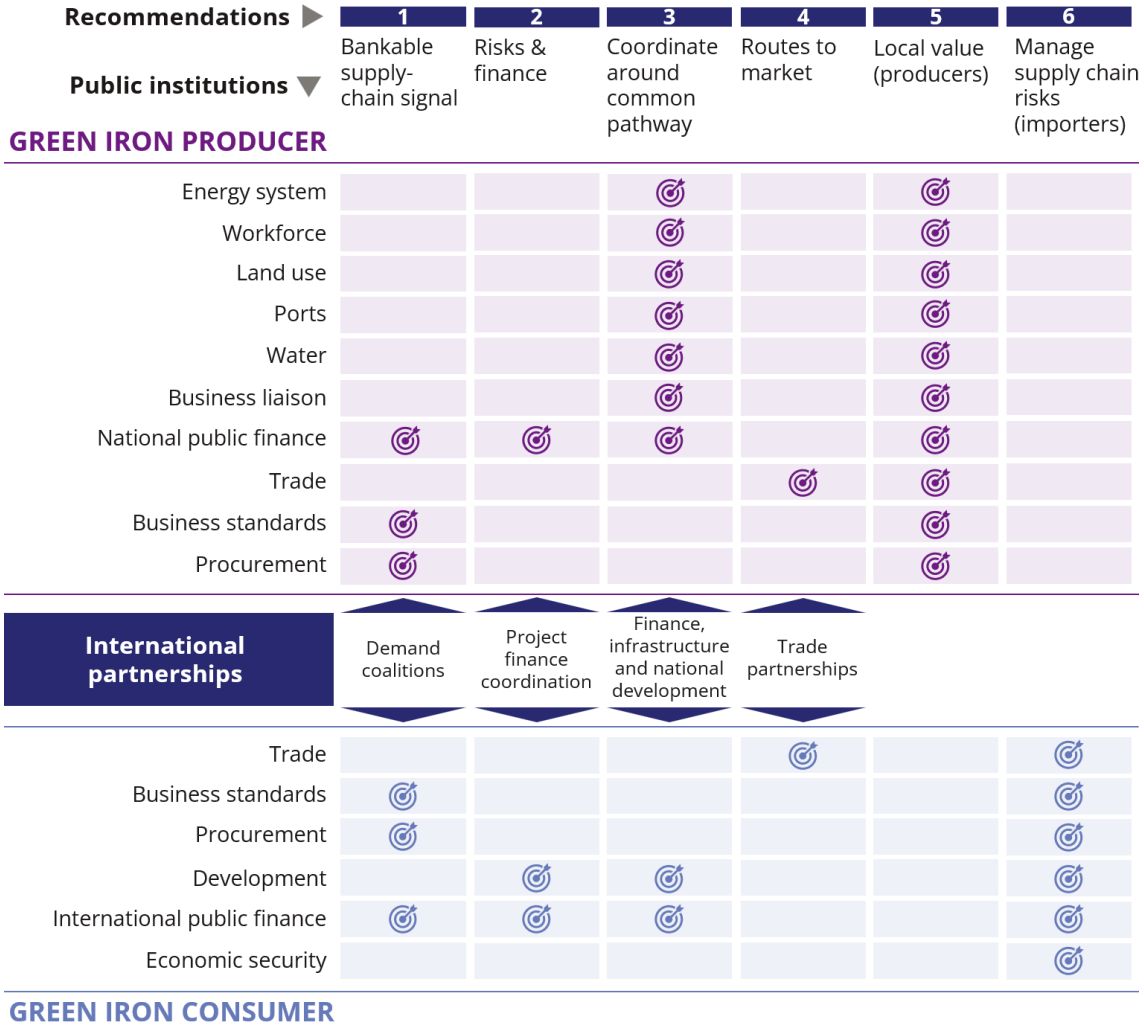


Figure 4: International partnerships in the green iron government matrix

Aggregate demand and make standards work across borders

Demand is another area where domestic action can be limited. A producer government can stimulate domestic demand, supporting early market development. But a viable green iron sector (and certainly a global green iron industry) will depend on demand from multiple countries of sufficient scale and coherence that producers invest against it. International collaboration should therefore help to aggregate demand and translate it into signals that producers can use.

Producer–country institutions need to understand what prospective customers require, including product characteristics, emissions profiles, data, and carbon accounting methodologies. They then need to communicate those requirements to domestic producers and ensure projects have the systems required to demonstrate compliance.

Importer-country institutions need the inverse: what their domestic steelmakers, regulators, and public purchasers require, while working with counterparts in producer countries to identify where standards or accounting systems can be made compatible.

International harmonisation of standards should not be treated as a prerequisite for trade. Standards bodies will take years to reach agreement; projects need to take investment decisions now, and most importantly, firms can make offtake agreements without international agreement on what counts as green iron.

Governments should, though, pursue agreement on which data must be collected, how emissions will be accounted for, what product characteristics matter, and how compliance will be demonstrated (and enforced) in target markets. This will be particularly important where carbon pricing or CBAMs affect business cases. If a producer cannot predict how its emissions will be recognised in a given market it may not be able to secure investment.

Demand coalitions

Demand coalitions can increase scale, with public procurers in several countries aligning or aggregating purchasing requirements, thereby replacing disparate signals with a larger market. Public finance institutions can also coordinate around offtake guarantees or other mechanisms where early projects require more revenue certainty than individual consumers can provide.

These arrangements produce three useful outcomes:

1. A stronger common understanding between producers and consumers of what constitutes a valuable green iron product.
2. A larger pool of institutions capable of backing early offtake.
3. Demand signals of sufficient scale to influence investment decisions rather than simply reward small volumes of production after projects are built.

Coordinate project finance across national and international institutions

Infrastructure finance and project finance overlap but are not identical. Even where enabling infrastructure is secure, an individual green iron project may require several public and private institutions to combine funding and support to reach FID.

National public finance institutions have an advantage, given their close knowledge of the domestic project, policy environment, and infrastructure dependencies. They should use this to identify gaps in the financing package and engage international institutions where their own resources, mandates, or instruments are insufficient.

International financiers should work with national institutions to identify where their support can be most additional. The guarantees, concessional capital, political-risk

protection, or other instruments international institutions can bring, can allow or incentivise commercial finance to participate.

The objective is not for one institution to finance an entire project. As Chapter 2 sets out, a viable package may involve equity, NDB lending, MDB guarantees, export-credit support, and commercial debt. **International collaboration needs to turn separate offers into a coherent financing structure.**

This requires more than convening institutions around a table. Different actors need to align on due diligence, risk allocation, and timelines, all while momentum is maintained between project developers and financiers. One institution waiting for another to complete a given process can leave an otherwise viable project stalled.

International partnerships therefore add value by identifying projects jointly, agreeing where different institutions can contribute, assigning responsibility for particular risks, and maintaining a common pathway to FID.

When the same investment serves both producer-country development objectives and importer-country supply chain objectives, international public finance should be capable of recognising both, rather than treating each as unrelated mandates.

Connect finance to infrastructure and national development plans

Many prospective green iron projects will be located in countries where the cost of production is attractive – usually due to the economic efficiency of energy, land, and labour relative to other countries. However, the necessary infrastructure may not already be in place in these countries, or it may not be possible to mobilise sufficient levels of finance from domestic sources.

Private firms and producer country governments should be capable of articulating what a viable project or pipeline requires against what is already in place (though international collaboration can also provide value here, sharing lessons from similar projects). This allows them to explain how investment in, for example, an individual grid connection, port, water system, or skills programme contributes to a wider industrial objective. Rather than presenting international partners with a series of disconnected requests for finance, this allows governments and relevant firms to connect with development ministries, MDBs, DFIs, export-credit agencies, and public financiers in prospective importer countries.

These institutions may have larger balance sheets, or bring instruments such as guarantees, concessional finance, or technical assistance, to prospective developers. However, these institutions also have their own mandates. Development institutions, for example, will need to understand how increasing green iron supply can support industrialisation and local development. Importer country institutions may need evidence that their investment would contribute to economic security and supply diversification.

Where those mandates align, governments should seek to establish a mechanism for co-delivery rather than leaving individual projects to navigate institutions and global value chains separately.

This can lead to larger, better-coordinated finance flows into enabling infrastructure, confidence that public finance is addressing the critical constraints for project delivery, and stronger connections between (global) financiers and the domestic institutions responsible for ensuring that investment produces wider economic and social value.

▶ Oshivela/HyIron

Linking public finance and industrial objectives across borders

Namibia's Oshivela project, developed by HyIron, shows how cross-border public finance can advance complementary industrial objectives in producer and importer countries. At the plant, renewable electricity powers a 12 MW electrolyser to produce green hydrogen, which is then used in the direct-reduction process to remove oxygen from iron ore, creating metallic iron for steelmaking without a coke-based blast furnace. The first phase is designed to produce around 15,000 tonnes a year, and HyIron is assessing expansion towards 1 million tonnes annually.

Germany's Federal Ministry for Economic Affairs and Energy provided €13 million to the project through its programme for international hydrogen projects. Supporting overseas projects may seem contradictory to Germany's aims to maintain domestic steel production and processing. However, Oshivela forms part of Germany's wider international hydrogen policy and, according to the German government, could help German companies transition towards climate-friendly steel. In effect, it offers a potential future source of lower-emissions iron that can support competitive steel production in Germany without requiring all iron reduction to take place domestically.

For Namibia, green iron creates an opportunity to turn abundant renewable energy resources into higher-value industrial activity while developing new green value chains. By the plant's opening in April 2025, the project had already created 100 new jobs, with several thousand more envisaged in later expansion phases. Oshivela is not yet a full green iron trade corridor, but it demonstrates how international public finance can create new industrial capacity and value in a producer country, while providing an importer country with the affordable, lower-emissions inputs needed to sustain its own industrial transition.

Country platform approaches, as discussed in **Chapter 2**, can provide another model. Where a producer country has an existing, nationally-led platform or investment pipeline, international partners should work through that structure where possible rather than creating a parallel financing architecture.

This matters for local value as well as commercial viability. International finance should not support infrastructure in isolation from the development choices discussed in **Chapter 2**. Where public investment enables access to energy, land, or other nationally controlled resources, governments must maintain the ability to negotiate workforce, supplier, environmental, ownership, and wider development outcomes.

In this sense, an international infrastructure partnership should not simply make green iron cheaper to export, but help producer governments develop a productive asset base on terms that support wider industrial and development strategies.

Build trade partnerships around market access, resilience and fair value

The final connection is trade itself. Producer-country trade officials should understand which markets are most important to domestic green iron projects and pursue predictable access to them. Importer-country officials should understand which prospective producer countries can contribute to diversified, competitive supply and seek trade conditions that make those relationships viable.

This can include tariffs and safeguards, customs procedures, rules of origin, product certification, carbon accounting, and the interaction between domestic carbon prices and border measures such as CBAMs.

These arrangements are important as **regulatory differences can affect a project's economics even where no government intends to restrict green iron trade.** A carbon accounting methodology recognised in one country but not another, or uncertainty over the future application of a steel safeguard, can reduce the value of a prospective market enough to affect FID.

Collaboration should seek to reduce avoidable friction rather than pursue freer trade as an end in itself

Importer governments have legitimate interests in preventing carbon leakage, unfair competition, and excessive dependence on individual suppliers. Producer governments have legitimate interests in ensuring market access does not lock them into extractive relationships in which natural resources, infrastructure, and public support generate little domestic value.

For producer governments, this means pursuing access to attractive markets while retaining the ability to capture a fair return from nationally controlled resources, building domestic capabilities, and moving further along the value chain over time. For importers, it

means securing lower-cost clean inputs without allowing trade policy to undermine the domestic steelmaking and manufacturing capabilities that green iron imports are intended to make more competitive.

Diversification can be an explicit shared objective. Producer countries benefit from access to several importing markets rather than dependence on one source of demand. Importer countries benefit from several prospective producers rather than replacing one concentrated dependency with another. International partnerships can help create this web of relationships before the market is mature enough to do so organically.

Partnerships should connect delivery systems, not create another layer of process

The common thread across these areas is that international collaboration should connect functioning domestic systems rather than compensate for their absence.

Governments need to know what outcomes they are seeking, public financiers need mandates that allow them to participate, standards and procurement institutions need clear demand signals, trade officials need to understand the industrial outcomes they are attempting to enable. Once those domestic positions exist, international partnerships can connect around real projects and pipelines.

The prize is not simply more international cooperation, but a division of labour in which producers and importers use their respective capabilities to make green iron projects investable and tradeable while protecting the public objectives that justify government intervention in the first place.

Building a green iron partnership

The following roadmap is **indicative rather than prescriptive**. Building on the recommendations and delivery structures set out in **Chapters 2 and 3**, it draws on emerging models of international clean industry cooperation. Governments should adapt it to their existing institutions, bilateral relationships, and the maturity of the projects involved.

Start with a defined economic outcome

A partnership should begin by identifying the economic and industrial outcomes participants are trying to achieve. This could be a specific green iron development, a wider trade corridor, or a credible pipeline of infrastructure investments across multiple sectors.

Governments should then define what they expect from it – for example, production and offtake volumes, supply chain diversification, infrastructure development, emissions reductions, and domestic value.

General agreements to "cooperate on green hydrogen" or "promote green industry" do not create investable projects. Objectives need to be specific enough that governments can work backwards from them to identify what is preventing delivery.

The **EU–Namibia Strategic Partnership on sustainable raw materials and renewable hydrogen** illustrates the value of moving from a political agreement to defined economic objectives. A 2022 MoU[24] was followed by a joint 2023–25 implementation roadmap aimed at greater value-chain integration, local refining and beneficiation, infrastructure development and market creation, rather than leaving cooperation at the level of a diplomatic declaration.[25]

Establish political ownership and responsibility on both sides

Partnerships should identify which parts of government are responsible for delivery. Each country needs a principal ministry or agency with the political authority to convene domestic institutions (as identified in Chapter 3), as well as a senior political sponsor able to resolve disputes or trade-offs with partners.

That government-to-government structure should then bring in the institutions needed for delivery: project developers, infrastructure providers, NDBs, MDBs and development finance institutions (DFIs), export-credit agencies and prospective buyers. Participation can then follow specific barriers, instead of creating a general forum in which every possible stakeholder is represented.

Again, existing partnerships demonstrate both these elements. The EU–Namibia model is delivered through a "Team Europe" structure involving the EU, member states, the EIB, and development finance institutions.[26] Similarly, the **EU–South Africa Clean Trade and Investment Partnership (CTIP)** aims to combine both government-to-government implementation and business-to-government engagement,[27] to create a route for firms to identify practical investment and regulatory barriers, instead of relying solely on diplomatic dialogue.

Produce a joint barrier-to-FID roadmap

Once priority projects or pipelines have been identified, governments should map, collaboratively, what still prevents them from reaching FID. This should cover the systems identified throughout this report (land, permitting, power, hydrogen, water and ports), as well as project finance, demand and offtake, product and emissions standards, and access to target markets.

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[24] European Commission, 2022, **Partnership on sustainable raw materials value chains and renewable hydrogen between the EU and Namibia**

[25] European Commission, **Implementation of partnership on raw materials value chains and renewable hydrogen in Namibia** (website, accessed 29 October 2026)

[26] Delegation of the European Union to Namibia, 2021, **EU projects with Namibia**

[27] European Commission, 2026, **EU and South Africa kick off intergovernmental dialogue on Clean Trade and Investment Partnership**

For each material barrier, the roadmap should identify:

- The institution responsible for resolving it.
- The action or financial instrument required.
- Dependencies on other interventions (sequencing).
- An indicative timetable for delivery.

This turns a partnership from a collection of bilateral initiatives into a common project-development pathway.

Again, there are useful real-world examples. The EU–Namibia partnership explicitly moved from an MoU to a roadmap with **"concrete actions"** across six pillars covering value-chain integration, environmental, social and governance (ESG) standards, finance mobilisation, skills, research, and regulatory alignment.[28]

The workstreams for a green iron partnership would of course differ slightly, but the principle is the same: political cooperation must be translated into explicit delivery areas, with identifiable activities.

Structure transactions around the barriers identified

The next step is to combine what each participant can contribute.

Producer-country institutions may be able to provide land, permits, infrastructure planning, domestic public finance, and a route through local government. Importer-country institutions may contribute development finance, export credit, guarantees, and access to strategically important markets. MDBs and private financiers can then be brought in to fill identified financing and risk gaps.

The EU–South Africa CTIP should use this approach. The goal is for implementation to be organised, in part, around **specific business cases and flagship projects**, alongside investment facilitation and regulatory cooperation. This would include expansion of South Africa's grid, renewable energy and green hydrogen production, and critical-mineral value chains, rather than treating trade and investment cooperation as a purely horizontal dialogue.[29]

For green iron, this approach could involve linking a prospective DRI/HBI facility to a defined power and port investment programme, a package of national and international finance, prospective offtake and a route into the importing market.

[28] European Commission, **Implementation of partnership on raw materials value chains and renewable hydrogen in Namibia** (website, accessed 29 October 2026)

[29] European Commission, 2026, **EU and South Africa kick off intergovernmental dialogue on Clean Trade and Investment Partnership**

Agree how risks and value are shared

Politically durable partnerships require governments to provide clarity on how value and risk will be shared.

In return for the allocation of energy, land, infrastructure, and public finance, a producing country may require specific returns in the form of employment and skills, development of domestic suppliers, shared infrastructure expansion, tax revenues, environmental and social safeguards, and/or opportunities for further downstream processing.

For importer governments, financial support may require specific returns in the form of defined volumes of material, supply diversification, reliable access to lower-emissions inputs, and lower costs (or other benefits) for their domestic steelmakers.

These objectives should form an explicit, complementary bargain when projects and public support are constructed, rather than separate negotiations once investment decisions have been taken.

This principle is visible in emerging partnerships. Again, the EU–Namibia partnership pairs European objectives around secure, sustainable supply with explicit commitments to **local value addition in Namibia**, and the EU–South Africa CTIP combines EU supply chain and investment objectives with South African industrialisation, beneficiation, and just transition.[30]

Create a delivery, review and escalation mechanism

Finally, partnerships must maintain momentum after initial agreements are signed.

Officials should regularly review measurable project milestones, such as land permits secured; financing mobilised; offtake agreements signed; FIDs reached; and construction under way. Problems that cannot be resolved at working level should have a clear route for escalation to senior officials or political sponsors. Industry participation is key here, as project developers and buyers often have the best understanding of practical and commercial barriers.

The EU–South Africa CTIP business-to-government engagement and senior government-to-government dialogues again provide a model. For example, its first intergovernmental implementation dialogue in July 2026 explicitly focused on flagship projects, trade, and investment barriers, and regulatory cooperation.[31]

The purpose is not to create another international forum, but a cross-border mechanism for identifying barriers and resolutions.

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[30] European Commission, **Implementation of partnership on raw materials value chains and renewable hydrogen in Namibia** (website, accessed 29 October 2026)

[31] European Commission, 2026, **EU and South Africa kick off intergovernmental dialogue on Clean Trade and Investment Partnership**

ABOUT E3G

E3G's mission: A safe climate for all

A safe climate for all underpins a future where humans and the natural environment can survive and thrive, where the most vulnerable are protected from climate impacts and economic systems prioritise people and the planet.

To achieve our mission, we build the policy solutions and political conditions for systemic action on climate. We:

- Work to win the politics and geopolitics of climate.
- Build the political conditions and policy solutions to drive the phase-out of coal, oil and gas from the global economy.
- Promote reforms to financial systems to secure the investment needed for mitigation and adaptation.

We are strategic thinkers

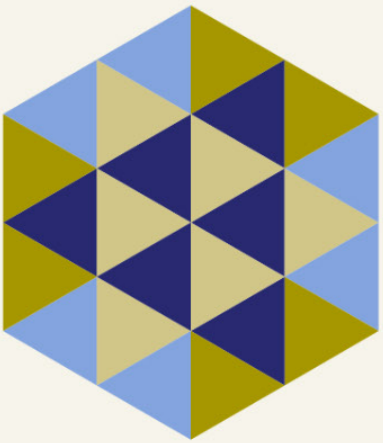
We combine deep strategic understanding with policy expertise. We analyse the political economy of climate and develop scenarios of how the future may evolve and what can be done to manage risks and exploit opportunities for action.

We are architects of climate action

We bring diverse stakeholders together to align action and foster dialogue. Through our collaborative approach we build connections and bridges, open windows of opportunity and create coalitions for change.

We are trusted brokers

We work closely with those driving climate politics forward, supporting them to tackle challenges behind the scenes. Governments rely on our knowledge of how to get things done in climate policymaking.



E3G

Berlin
Neue Promenade 6,
Berlin, 10178, Germany
+49 (0)30 2887 3405

Brussels
Norrsken House
Rue du Commerce 72
Brussels, 1040, Belgium

London
4 Valentine Place,
London SE1 8QH, UK
+44 (0)20 7038 7370

Washington
1800 M St NW, Suite 530 South
Washington DC, 20036, US
+1 202 466 0573