re-sourcing

# Meeting the Milestones in the Responsible Sourcing Roadmap

## Good Practice Guidelines for the Renewable Energy Sector

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# Executive Summary

Keywords: Renewable Energy, Corporate Sustainability Policy, Life Cycle Approach, Industry Guidelines, Business Case

The good practice guidelines on responsible sourcing (RS) in the renewable energy sector outline key practices distilled from the RE-SOURCING Project's research and consultations on the Renewable Energy (RE) Sector. As a means to promote peer learning and increase the uptake of RS practices, this document is of relevance to all actors involved in the RE Sector, in the EU as well as internationally. Four good practice guidelines are elaborated in this document, with case studies to show how they have been implemented.

The first good practice guideline focuses on developing a Coherent Sustainability Approach for an Extractive Company. Using the case of Antofagasta Minerals (Chile) mining company, it outlines the steps in creating such a strategy, from the drafting of a vision to creating the appropriate management structure and tools to support its implementation. The approach was based on identifying and prioritising issues for inclusion in sustainability policy, the development of appropriate management structures and responsibilities, and development of company documents and tools to support the policy.

The second good practice guideline describe the development of a Full Life Cycle Assessment (LCA) Business Model, which is illustrated by the case of First Solar, a manufacturer of Solar PV panels. The good practice presents considerations for the LCA system design and decommissioning costing of solar panel farms. The case also considers how clients can be offered finance packages to encourage return and recycling of solar PVs at end-of-life. The business model has resulted in improved recycling rates and lower environmental footprint of firm.

The third good practice guideline considers the development of a Shared Supplier Assessment Scheme and database, using the example of Together for Sustainability initiative. The guidelines describe an example from the chemical sector and the efficiency gained from the economies of scale. The case presentations consider the important steps in starting such an initiative, particularly the communication and engagement with suppliers.

The final good practice guideline considers the good practice of using a Consultative Approach for designing a National Mining Policy, with the case of Chile being used to illustrate the process. The Ministry of Mines and Energy of Chile designed a multi-stage consultation process, identifying appropriate stakeholders for consultation – technical and legal experts, communities, mining companies, environmental groups, human rights advocates etc. The consultation process led to the identification of key sustainability issues. The main aspects of the case comprise communicating and engaging with stakeholders to ensure participation particularly from under-represented communities. The results from the consultation process provided guidance and direction for policy makers for issues and targets of importance in designing their national mining policy.

While different governments and companies are moving at different paces to address climate change and sustainability issues, it is important to recognise that they are all moving in the same direction. RS approaches ingrained in business practices will become more common. While initially successful RS approaches may set a company or a government apart, in the medium term these approaches are expected to become standard operating procedures. The better the uptake of RS practices, the more level the playing field.

# Abbreviations

| | |
|---|---|
| CAP | Collective Action Plan |
| Cefic | European Chemical Industry Council |
| CEO | Chief Executive Officer |
| EoL | End of Life |
| ESG | Environmental, Social and Governance |
| EU | European Union |
| GRI | Global Reporting Initiative |
| GW | Gega watts |
| HEPA | High Efficiency Particulate Air filter |
| ICMM | International Council on Mining and Metals |
| ISO | International Standard Organisation |
| LCA | Life Cycle Assessment |
| PV | Poly Voltaic |
| RE | Renewable Energy |
| RS | Responsible Sourcing |
| SQAS | Safety & Quality Assessment for Sustainability |
| TfS | Together for Sustainability |
| US | United States |
| WEEE | Waste Electrical & Electronic Equipment |
| WEF | World Economic Forum |

# 1 Introduction

## 1.1 The Vision for the Renewable Energy Sector

The EU's commitments under the 2015 Paris Agreement have set the region on a transition to a low-carbon, circular economy. In line with these commitments, the European Commission presented its strategic roadmap for a climate-neutral Europe by 2050, in November 2018. The roadmap's strategic priorities include 1) putting industrial modernisation at the centre of a fully circular economy; 2) embracing clean, safe, and connected mobility; and 3) fully decarbonising Europe's energy supply, amongst other milestones.[1]

The Renewable Energy (RE) sector is an important component of this transition plan. Within the RE Sector, 91% of the energy is currently generated from biomass, hydropower and wind (2017). The EU target under the revised Renewable Energy Directive is set at 32% energy from renewable energy sources by 2035.

In 2016, the RE industry was valued at €149 billion, providing more than 1.4 million jobs in the EU.[2] The RE sector directly addresses the EU priority Societal Challenge to secure clean and efficient technology. In 2011, the EU accounted for the largest share of global investment in clean energy but was overtaken by China in 2015. Between its peak in 2011 (€126 billion), new investments in clean energy in Europe had fallen to €68 billion by 2018.[3]

The RE-SOURCING Project's research on the RE sector focuses on the global value chains for wind and solar energy, as these are the fastest growing sources of RE[4]. RE requires a wide range of metals (copper, steel, aluminium, lead, tin, zinc, rare earths, etc.) which are largely imported from outside the EU. The manufactured components (wind turbine blades) although largely produced in the EU, also contain imported inputs (such as rare earth magnets). As RE sector products, both used in the domestic market and those exported to non-EU countries, come to end of life, disposal is also a key challenge that needs to be addressed. Therefore, Responsible Sourcing (RS) issues across the value chain need to be addressed[5].

The State of Play & Roadmap Concepts: Renewable Energy Sector Report (2021) discusses these challenges in more detail. Further to this discussion and in consultation with key stakeholders, the project team has developed a Vision and a Roadmap for the sector. To aid the roadmap process, this document provides a set of guidelines for specific milestones for the RE sector, which firms and governments can utilise in achieving the milestones laid out in the roadmap.

### 1.1.1 Why Responsible Sourcing Matters across the RE Sector

While the provision of renewable energy makes a positive contribution towards the EU's green transition goals, the responsible sourcing issues around the inputs of this sector need to be

[1] Our Vision for a Clean Planet for All. EC (2018)

[2] Renewable Energy Policy Factsheet. EuroObserv'ER (2018)

[3] Clean Energy Investment Trends, 2018. Bloomberg (2019)

[4] See Re-SOURCING webpage for more details.

[5] For more information on the meaning of responsible sourcing within this project, please see RE-SOURCNG Common Approach Report (2020)

considered. The extractive and the manufacturing sections of the RE value chain have issues linked to human rights violations and significant environmental impact, a lack of commitment to paying fair wages, gender equality, and conflict with local communities. The manufacturing of steel for wind turbine towers, or of metal grade silicon for solar panels is very energy intensive. Inadequate collection and treatment of equipment for both technologies can be the cause of environmental pollution (toxins from solar PV batteries) and considerable amounts end up in landfills (such as composite materials from wind turbine blades).

As noted by Leth, Wilde-Ramsing and Kwizera (2019), the level of due diligence within the RE sector is weak. These RS issues are emerging areas for actions by policy makers, businesses, manufacturers, and recyclers, as they look at greening entire value chains. Increasingly investors, consumers and civil society stakeholders are asking actors in the RE value chain to act responsibly and evidence their business practices[6]. There is an emerging imperative for improving the uptake of RS approaches across the RE sector.

### 1.1.2 Purpose of this Document

The State of Play & Roadmap Concepts: Renewable Energy Sector Report (2021) provides a comprehensive list of challenges faced at the mining, manufacturing and recycling stages of the RE value chain for wind turbines and solar panels. Some of these challenges are being addressed through Sustainability and Responsible Sourcing legislation (EU), voluntary industry standards and due diligence guidelines and reporting mechanism.

Incorporating RS practices in business operations is becoming more common for both downstream and upstream companies. Governments are increasingly looking at designing mineral policies that incorporate the principles of sustainability.

To increase the uptake of RS approaches amongst a larger number of stakeholders and actors, peer learning and good practice learning can be a successful avenue to benefit from the experience of others. This document serves to share good practice guidelines, based on principles of transferability, amongst RE sector actors.

### 1.1.3 Methodology & Approach

An initial list of RS challenges facing the RE sector was documented in the State of Play & Roadmap Concepts: Renewable Energy Sector Report (2021). During engagements and consultations with sector stakeholders, good practice examples were noted, defined as the use of innovative approaches addressing existing and foreseen challenges. Through a selection process involving discussions with sector experts, the Project's Advisory Board and Project Steering Committee, four cases were selected that spoke to different nodes of the value chain, offered global/regional coverage, and addressed different issues within the RS agenda.

Case owners (experts involved in the design or implementation of the respective practice) were identified for each of the good practice examples and interviewed by the project team. In addition, the case owners presented and discussed their cases at the Flagship labs for the RE sector by this project in 2021.

[6] The International Responsible Sourcing Agenda Report (2020)

Distilling the information presented by the case owners, as well as additional research carried out for this document, the guidance presented here is a step further from the specificities discussed in the FS labs.

It is important to note that the guidance document is focused on more general *good practice principles* (i.e., design of a coherent corporate sustainability approach in an extractive company) and while organisations have been used to illustrate these practices, the RE-SOURCING project *does not speak to the overall responsible sourcing performance of the organisation* – we only highlight aspects of one particular good practice that the organisation has undertaken.

This document provides four cases for the RE sector (see Table 1). The first two good practice principles are applicable across all mineral value chains while the other two are specific to the RE sector. Where appropriate, the document includes additional resources for the reader.

Table 1 Selected good practice principles

| Coherent Sustainability Approach for an Extractive Company<br>Case Study: Antofagasta Minerals |
|---|
| Strategy<br>• Identifying & prioritise issues for inclusion in sustainability policy<br>• Designing appropriate management structures & responsibilities<br>• Drafting and development of company documents & tools to support policy<br>Process<br>• Identification & engagement with external & internal stakeholders/experts to define objectives, guidance tools & policy documents<br>• Negotiating & communicating with senior, mid-level and junior managers in implementing/taking up sustainability strategy requirements/KPIs<br>• Training & identifying other company resources required to implement policy<br>Impact<br>• Company sustainability reporting in line with international standards (ICMM + GRI)<br>• Reporting sustainability approaches & policies undertaken by company to external stakeholders: community, clients, investors. |
| Full Life Cycle Assessment Business Model<br>Case Study: First Solar |
| Strategy<br>• LCA system design & decommissioning costing of solar panel farms<br>• Sale to clients with recycling of solar panels as an add on module<br>Process<br>• Setting up a financial trust to deal with the financial flows<br>• Mapping client engagement process, logistics etc<br>Impact<br>• Improved recycling rates and lower environmental footprint of product<br>• The improvement in Social Licence to Operate for the company<br>• Compliance with current and expected regulations. |
| Supplier Assessment Through Shared Resources<br>Case Study: Together for Sustainability |
| Strategy<br>• Development of a joint industry supplier database & standardised assessment scheme<br>Process:<br>• Development of a standardised audit administered by a third-party |

- Engaging with suppliers to undergo/uptake of assessment & audit schemes

Impact

- Increased number of suppliers in scheme
- Resource efficiency (human/financial/time) for both client & supplier
- Continuous engagement for further sustainability metric improvements for suppliers.

**Consultative Approach to Designing a National Mining Policy**
**Case Study: Chile National Mining Policy**

Strategy

- Designing a multi-stage consultation process
- Identifying appropriate stakeholders for consultation – technical & legal experts, communities, mining companies, environmental groups, human rights advocates etc.
- Identification of sustainability issues & how they will be addressed in the consultation process
- Review of similar consultative approaches undertaken by other countries

Process

- Identifying & engaging with stakeholders
- Ensuring wide participation takes place
- Preparing for logistics, reporting & aggregating findings from consultations
- Addressing consultation fatigue

Impact

- Pre-national policy document report to assist which issues to be covered by national policy
- Providing guidance & direction for policy makers for issues & targets of importance to multiple stakeholder groups

The next four chapters address each of these cases in detail, with the final chapter offering some general guidance based on these cases.

# 2 Coherent Sustainability Approach for an Extractive Company

The Responsible Sourcing (RS) challenges in the extractive sector are well documented and in recent years a plethora of responsible mining standards and guidelines have been created for the mining sector.[7] These cover issues from protecting the environment, to local community engagement, labour rights, good governance etc. So how does a mining company take these standards and convert them into a business and operations strategy? A good practice is to develop a corporate sustainability approach, that is coherent, allowing it to address several sustainability challenges across the business.

Given the negative impact of extractive activity[8], EU based mineral raw material consumers need to consider the RS credentials of the minerals they utilise. This task can be aided by increasing the number of international extractive companies that have a coherent corporate sustainability approach and can evidence the implementation and impact of RS.

## 2.1 Business Case

Given the increasing demand for responsible mineral extraction demanded by communities, civil society, investors, clients, national governments and from within the mining industry itself, extractive companies will need to develop, implement, and report on their sustainability practices. In addition, legislative requirements at the EU level (Conflict Mineral Regulations, Corporate Sustainability Reporting) and at Member State level (Germany's Supply Chain Law) will require EU actors to verify the sustainability credentials within their chains.

In the medium and long term, companies that are not compliant with legislative requirements as well as industry/investor/civil society voluntary standards, will find it more difficult to attract investments, access (EU) markets and attract a skilled labour force. Therefore, to continue to operate profitably, mining companies need to develop a coherent sustainability approach for their operations.

### 2.1.1 The Good Practice Principle

Taking the plethora of standards, guidelines and reporting templates that are recommended for the mining sector, a company needs to incorporate these approaches within its management structures and processes. This process consists of the following elements:

- Develop a cohesive responsible mining strategy that addresses all major sustainability issues.
- Review international best practice standards, and transform them into an operable company strategy.
- Ensure the policy addresses concerns raised by its own employees, local communities, national governments, and international clients.
- Ensure sustainable practices are not separated from the company's economic performance and growth.

### 2.1.2 Guideline Scope & Contribution

[7] See The International Responsible Sourcing Agenda Report (2020) for more information.

[8] See publications from the RE-SOURCING Project here.

The guidelines provided in this chapter are primarily for the extractive sector, however, organisations operating in the manufacturing or recycling nodes of the value chain can also draw upon the higher-level elements of this strategy. The outcome of these guidelines should contribute towards an extractive company examining and improving its current sustainability approach, implementation, and reporting performance.

To illustrate this good practice, this chapter uses the case of Antofagasta Minerals, which is the seventh largest global copper producer, extracting 775,000 tonnes of copper in 2020 from its Chilean mines, for clients in a variety of sectors and regions. The company is part of the FTSE 100, with a market capitalisation of US$ 19.4 billion, which brings increased investor and civil society scrutiny on its sustainability performance.

This chapter outlines the approach taken by the company in designing its sustainability approach. It focuses on the process of developing this approach rather than on the sustainability issues themselves.[9] The next section describes the steps for creating a corporate policy, from vision to action areas. The proceeding section considers management structures, followed by considerations of reporting approaches. The final section offers some additional considerations for companies seeking to utilise a similar process to develop their corporate sustainability policy.

## 2.2 Steps in Creating a Coherent Corporate Approach

This section outlines the steps taken to develop a coherent corporate approach.

### 2.2.1 Creating a Vision

The first step is to create a company vision statement, clearly articulating what the company aims to achieve. This statement acts as a starting point and a guiding principle for strategy and processes, as all subsequent approaches have the objective of meeting this vision statement. The vision statement is aimed for the medium to long term and does not change on an annual basis.

The Antofagasta corporate sustainability strategy starts from a

Figure 1: Antofagasta's sustainability vision


Source: Antofagasta Minerals Sustainability Report 2020

[9] For more information on sustainability issues please see State of Play & Roadmap Concepts: Renewable Energy Sector Report (2021)

vision: "*To be an international mining company based in Chile, focused on copper and its by-products, known for its operating efficiency, creation of sustainable value, high profitability and as a preferred partner in the global mining industry*".[10]

There are three elements from the Antofagasta vision statement that should be considered:

**Focus on core business**: The vision statement for Antofagasta starts with a clear statement of the core business of the company – an international mining company focused on copper production. The vision statement is not distracted by vague aspirations or phrases but verbalizes the core competencies of the business.

**Internal ambition**: The second part of the vision statement outlines three key principles for business operations – efficient use of the resources controlled by the company, inclusion of material sustainability in operations and maintaining the profitability of the business. These articulate the internal drivers of the business and further elaboration by business strategy documents will indicate how these drivers will be utilised.

**Outward looking**: The final part of the vision statement is outward looking – it focuses on how the company wishes its partners to view it – as a preferred partner. Note that the vision statement does not refer specifically to clients, investors, communities, or vendors, but uses the term 'partner' to signify that the engagement is based on mutual considerations.

**Good Practice**: Through internal and external discussions, articulate a vision for the company that is clear and meaningful and does not rely on vague or overly ambitious sustainability terminology.

### 2.2.2 Forming a Strategy to Achieve the Vision

The vision is a succent statement of company ambitions and the next step is to decide on the 'pillars' that will support the achievement of these ambitions. Antofagasta has selected five pillars for its strategy: 1) People, 2) Safety & Sustainability, 3) Competitiveness, 4) Growth and 5) Innovation. Note that the pillars are not based on business units (such as engineering or transport) but form the underlying theme for all aspects of the business operations. Additionally, each of the pillars individually and collectively contributes to the achievement of the vision.

**Good Practice**: In considering areas of strategic focus to support the vision, identify pillars that are relevant across all operating units and company processes. At this stage avoid a silo approach by focusing on single business process. Ensure that the strategy pillars are not too opaque or vague and refer to a concrete set of factors relevant to the company. In designing the different pillars seek synergies and identify trade-offs among these pillars. Consider measures for mitigating trade-offs and repurcussions that might occur.

### 2.2.3 Defining Objectives for Each Pillar

Having identified the pillars, the next step is to draft the objectives for each pillar. At this stage, the process starts to address specific subject areas but should maintain a cross-cutting approach across operations, ensuring there is coherence in the sustainability approach for the firm. For example, Antofagasta defines the following objectives for its Safety & Sustainability Pillar:

- Health & Safety: To install a resilient health and safety culture

[10] Developing Mining for a Better Future. Sustainability Report (2020). Antofagasta Minerals.

- Social: Contribute effectively to the social development of regions
- Environment: Position Antofagasta as a leading company, through the implementation of the company's integrated Climate Change Strategy.
- Communications: Position the company as a relevant player in the mining industry in Chile.

Each of these objectives cover different aspects of the company's operations, from labour rights to community engagement, engagement with other stakeholders including national governments and other non-community actors. Reference to the company's Climate Change Strategy also adds a global relevance/scope for these objectives.

**Good Practice**: The definition of objectives is an important task – these need to be clearly outlined and must balance between being too open and too narrow. Objectives should outline the individual steps or milestones of achieving an outcome and not the means/process to achieving it – this is done at a later stage.

At this stage, objectives can also benefit from consultations with external experts, business partners (including communities) and be informed by standards and guidelines from industry initiatives. These objectives should be contextualised within the company's structure and operating framework.

### 2.2.4 Drafting a Policy

Having defined the objectives for each pillar, the next stage is to create a policy that provides a set of guidelines and tools to govern and inform the actions of its employees. The policies will define the scope of action and decision making as well as the role and responsibilities at different managerial levels. Internal business policies need to be specified for different managerial levels, drafted in easy-to-understand language (avoid using jargon) and the organisational hierarchy should be clear.

Using the example of Antofagasta's Safety & Sustainability Pillar, the corporate policy outlines processes and targets to be implemented. These can either be set out as specific targets - zero fatalities - or as processes to be incorporated – diversity & inclusion strategy in the labour force. The role of management is discussed in more detail in section 2.3.

The drafting of a policy is to breakdown actionable practices that can be incorporated within business operations. Again, note that these are not specific to business units – for example inclusive hiring is not earmarked for the Human Resources department but is a consideration for the entire corporate entity.

### 2.2.5 Outlining Target Areas

The final step in the development of a coherent sustainability approach is to outline key areas, actions and targets. Their drafting will differ depending on the subject matter they address and may have different timelines for achievement. This stage is more responsive to the context of operations and can be specific to operating sites as well as the larger corporate strategy. Some examples from Antofagasta include:

**Target setting**: Some areas lend themselves easily to target setting. For example, reduction in emissions is measurable, and therefore the company can set a target (300,000 tonnes over a four-year period for example) to be achieved.

Others can be operations specific. For example, given the water intensity usage in copper production and one mine located in a particular water scarce region, the target was set to completely remove continental water usage and switch to seawater for that mine.

**Process setting**: Some areas do not respond well to measurements, particularly those addressing social development. In this area, the focus switches to processes to be incorporated rather than measurable targets. For example, Antofagasta process definition was to specify a preference for local suppliers and employment and not to set this target in terms of percentages of procurement orders.

Process setting can also incorporate external initiatives. For example, the company incorporates guidance and directives from the Task Force for Climate Related Financial Disclosures (TFCD) within its targets, which requires corporations to examine and disclose the climate impact of their capital expenditures.

**External validation**: Other targets can include initiating processes that will allow the company to achieve external validation. For example, Antofagasta is seeking validation for the Copper Mark which addresses sustainability approaches. The advantage of seeking compliance with a well-designed external validation service is that it provides the company with a list of actions to evidence its RS approaches. Such validation also signals assurance to third parties. While the external validation is part of the larger company strategy it is not meant to replace or be used instead of a corporate sustainability strategy developed by the firm itself.

**Good Practice**: Taking a bottom-up approach for target and action setting is recommended, incorporating individual nodes of business operations – these targets/actions do not need to be uniform across the business, but reflect the context of the area being targeted.

## 2.3 Management Structures

As noted in section 2.2.4, part of the designing the corporate policy is to clearly articulate roles and responsibilities for the organisation hierarchy and managers. The assigning of roles will be dependent on the size of the organisation, the historical structure of the organisation (flat or hierarchical management structures), geographical range of its operations. In general, the trend in corporate sustainability approach starts with responsibilities assigned at the highest level (Board of Directors) including linking performance with renumeration and bonuses. The next stage of managerial responsibilities can differ by firm. For example, Vale (major iron ore producer) has a separate advisory committee that provides input to the board of directors (including on sustainability), as well as an executive director on sustainability advising the CEO[11]. At Glencore (major diverse miner), the Health, Safety, Environment and Community Committee advising the Board sets out five-year strategic targets for sustainability and oversees the performance on these programmes. Senior management then have the responsibility to meet these targets.[12]

Within the Antofagasta, the highest level of responsibility and key decision making on sustainability issues is taken by the Board of Directors[13]. The Board has the overall responsibility for sustainability management – it approves the corporate policy, defines sustainability risk appetite (the level of risk acceptable for the firm) for the business, reviews, challenges and monitors key risks in the current and planned operations.

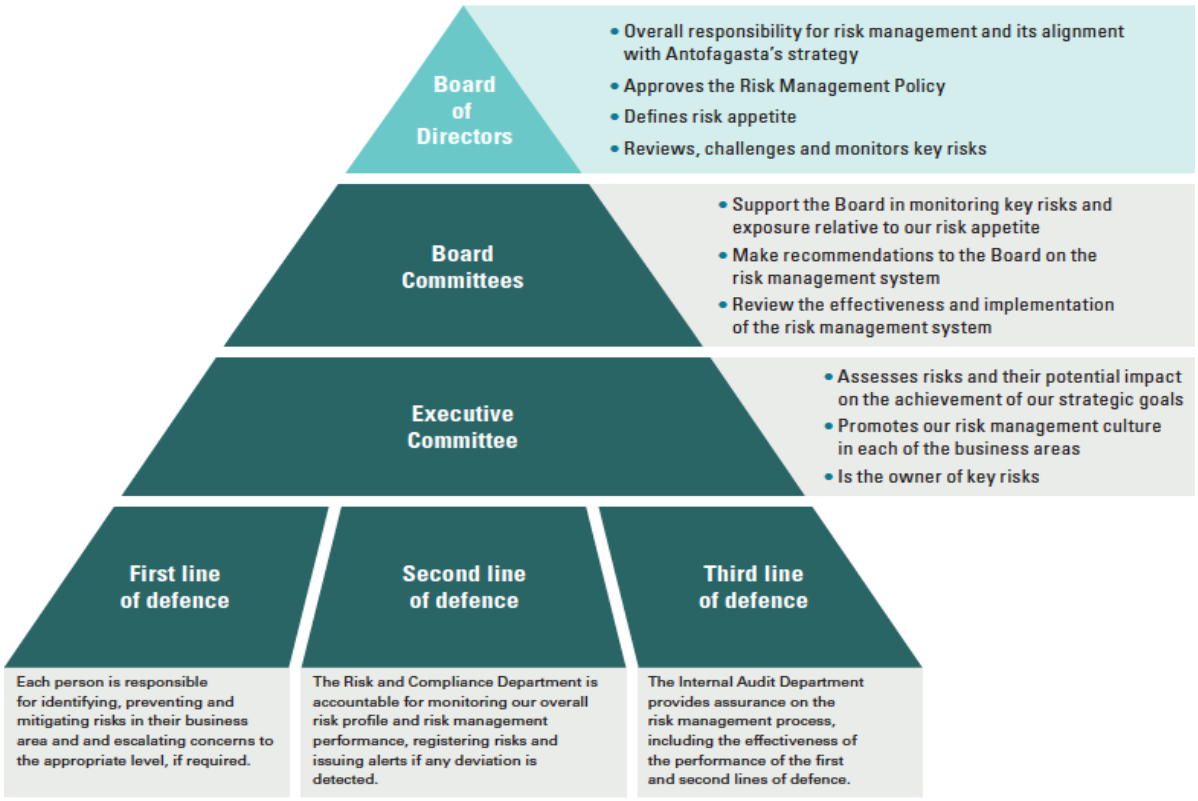
The Board is advised by Sustainability & Stakeholders Engagement Committee, which supports the Board in monitoring of sustainability across the company. The committee makes recommendations to

[11] Vale Corporate Governance (webpage)
[12] Glencore Sustainability Report (2020)
[13] Antofagasta Framework & Structure (webpage)

the Board on the sustainability management aspects and reviews the effectiveness and implementation of the policy.

At the next level, the Executive Committee assess risks and their potential impact on the achievement of the company's strategic goals, including sustainability. It implements the sustainability policy in each of the business areas and promotes a sustainability culture across the organisation (see Figure 2).

Figure 2 Management structures for sustainability at Antofagasta Minerals




Source: Antofagasta Minerals Sustainability Report (2019)

Other levels of management are equally expected to take responsibility for the company's sustainability approach, with each employee required to identify, prevent, and mitigate risks in their business area. The Risk and Compliance Department – referred to by the company as its second line of defence – monitors the overall risk profile and risk management performance of the business. The third line of defence – the Internal Audit Department – is tasked with providing assurance on the risk management process, including the performance of the employees and Risk & Compliance department.

**Good Practice**: It is important that decision making, and responsibility for responsible souring, is taken by the highest managerial levels i.e., the Board of Directors. However, 'buy-in' from middle and junior level staff is also essential and internal company communications must focus on brining all employees

and sub-contractors on to the same page. Assigning individual and collective responsibilities is not sufficient, responsibility for monitoring performance within the firm also needs to be assigned.

### 2.3.1 Key Policy Documents & Tools

To assist a coherent corporate strategy, a company will need to build several policy documents that lay out the objectives, approach and performance indicators as part of its management processes. To illustrate what issues may be covered, we list the Policy Documents and Tools developed by Antofagasta as part of its sustainability approach in Table 2.

Table 2 Policy documents & tools to support Antofagasta's sustainability approach

| Policy Documents | Tools |
|---|---|
| • Code of Ethics & UK Modern Slavery Act<br>• Supplier Due Diligence Guidelines<br>• Work-Life Balance Guidelines<br>• Human Rights Policy<br>• Regional Procurement & Recruitment guidelines<br>• Climate Change Standard<br>• Biodiversity Standard | • Social Management Model<br>• Environmental Management Model<br>• Compliance Model<br>• Crime Prevention Model<br>• Management & Measurement Model<br>• Risk Management Model<br>• Leadership Competencies Model<br>• Whistleblowing Channel<br>• Payments to Governments Report<br>• Integrated Management Model (*under development*) |
| **Reporting Templates** | |
| • ICMM Reporting Template<br>• GRI Reporting Template | |

Source: Collated from various Antofagasta sustainability reports

## 2.4 Reporting on Sustainability Performance

A key ingredient of a coherent corporate sustainability policy is to incorporate reporting guidelines on how the company's processes and impacts will be reported. The audience for reporting can include the company's own employees (including sub-contractors), those that are impacted by its operations (such as local communities and country of operations), investors and clients.

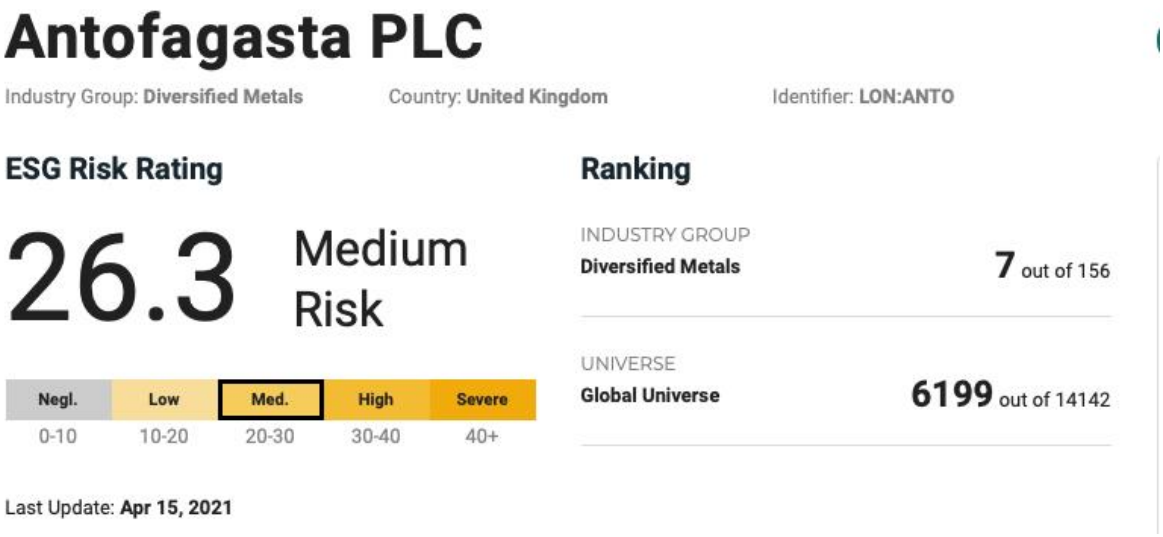
Antofagasta uses the Global Reporting Initiative Standards, with the reported data being verified by an external auditor. The annual reports provide information on company performance on safety, water consumption, $CO^2$ emissions intensity, local supplier, social contributions, and economic performance. They also include references to company processes that may be of interest to stakeholders such as its Human Rights Policy and Climate Change Policy.

**Good Practice**: With the emerging concerns around green washing by companies, it is considered good practice for extractive companies to report their actions according to an internationally accepted reporting template (GRI is one example). In addition, the information being reported carries more weight and relevance where it has been assured/audited by an independent third-party.

## 2.5 Impact

Antofagasta is considered to have 'high' risk exposure to Environment, Social and Governance issues by Sustainalytics (a reputable ESG Risk Indexing Service). This is not surprising given the region (water scarce areas) and business the company operates in. However, the management's approach to ESG Material Risk is assigned a 'Strong' rating, given its approach to managing sustainability issues. Within its industry group, the company is ranked seventh out of 156 firms.

Figure 3 ESG ratings for Antofagasta




Source: Sustainalytics Company ESG Ratings

## 2.6 Key Considerations in Designing Policy

This section considers some of the challenges that a firm may face in developing a coherent corporate sustainability strategy. These are issues to be aware of, while considering the good practices discussed in this chapter.

The term 'coherent' has been used in this good practice example several times, to highlight the importance of designing a sustainability policy that is fit-for-purpose and can deliver impactful results. There is a danger of a company offering a narrative for its sustainability approach, which has no meaningful impact on the way the business operates. This tends to occur when the objectives are unclear or vague, the corresponding management responsibilities are not clearly laid out, and the employees are not provided with actionable policy and tools to achieve those objectives. There are other issues and challenges a firm should consider when designing or improving its corporate approach.

**Key considerations**

- Conduct a materilaity analysis
- Design an internal & external communication strategy
- Provide appropriate tools to employees

### 2.6.1 Materiality Analysis

A firm will have limited human, financial and other resources to devote to its sustainability approach. To make the best use of limited resources it will need to prioritise certain issues above others. Conducting a good materiality analysis allows focus on issues that are important to the firm and its stakeholders. Antofagasta's materiality analysis was conducted on the following approach:

**Identification of potential issues:** Based on research and consultations – Antofagasta identified 38 potential topics, grouping them within governance and economic performance, people, the environment, and social engagement categories.

**Prioritisation of issues**: Based on extensive consultations, surveys and engagements within the firm and with external stakeholders, the issues were assigned low, medium and high priority to create a draft materiality matrix, relevant to each operation (mine).

**Validation**: The results were presented and validated by the Board and were subsequently raised to the level of the company – Antofagasta has four operating mines and transport business unit. This matrix is based on the significance of the organisations economic, environmental and social impacts in relation to the influence on stakeholders' assessments and decisions (See Antofagasta's Annual Sustainability Report 2020 for more details).

### 2.6.2 Internal & External Communications Strategy

In developing the corporate approach, communication is important, both with internal and external stakeholder and experts. Communication should be *understood separately from engagement*. Communication focuses on content being delivered to a defined audience while engagement is more of a learning and discussion process. Communicating what the company is considering, how these processes will be managed, and the goals and objectives for doing so are essential for stakeholders to engage with the development of the sustainability approach.

Communication is an important aspect in the development, implementation and post-implementation or evaluation setting of a sustainability approach development. In the initial stages, a strategy communicates what the company is trying to achieve and why. During the development process (and this is a continuous process to improve the approach) it focuses on how engagement will occur. Once the approach has been drafted, communication on implementation, responsibilities, assessment of performance becomes essential. A corporate sustainability approach that is understood at the Board level and not communicated effectively to the rest of the organisation and its external stakeholders will not be an effective one.

### 2.6.3 Provide the Appropriate Tools for Employees

Once an approach has been developed, provision of fit-for-purpose policies and tools for its implementation are essential. Effort is required to produce the appropriate tools for implementing a sustainability approach. Organisations can benefit from exploring the standards, guidelines, tools and templates produced by industry associations, civil society and other think tanks to aid them in this process (some of these initiatives are available here).

Tools and policies should be adapted to the operating context of the business. For example, external guidance for local community engagement would not be recommended for use for engagement with indigenous people – the appropriate guidelines should be employed.

Additional Resources:

- Antofagasta Minerals: Corporate Sustainability Approach
- RE-SOURCING Report: State of Play & Roadmap Concepts: Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Identifying Challenges & Required Actions for Responsible Sourcing in the Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Responsible Sourcing: The Case for Business Competitiveness (2020)
- RE-SOURCING Flagship Lab: The Renewable Energy Sector (2021)
- RE-SOURCING Roadmap Workshop: The Renewable Energy Sector (2020)

# 3 Using a Life Cycle Assessment Business Model

In the EU's Green Deal Roadmap, one of the strategic priorities is to put industrial modernisation at the centre of a fully circular economy. Circular economy considerations, at the firm level, can be assisted by several approaches, one of which is the life cycle assessment approach (LCA). The LCA focuses on assessing the environmental impacts of all stages of product manufacturing; from the supply of inputs to the production process and managing the product once it has completed its life cycle.

Most first-generation solar panels are beginning to reach end-of life (EoL) status. With an exponential increase in solar energy capacity, this waste stream will increase significantly (Corbley, 2020). With available technologies about 90% of solar panels (by weight) can be recycled and several countries are introducing legislation requiring their collection and treatment, including India, Japan and South Korea. The EU has a recovery target of 85% and a preparation for reuse and recycling target of 80% in place (Solar Power Europe, 2019; Corbley, 2020), forcing companies and consumers to address the collection and treatment challenges. Therefore, one of the challenges the RE Sector will encounter in the next decade is the issue of recycling.

The RE sector utilises some of the major metals (copper, steel) but is also dependent on a host minor metals that are listed on the critical raw material list of the EU (such as rare earths). The greater the level of circularity i.e., recycling of material, that can be achieved within the RE sector, the less reliance on virgin raw material as well as securing supply access from non-EU regions.

Designing a business model that incorporates end-of-life management and recycling meets the responsible sourcing agenda on two fronts: 1) it lowers demand for virgin raw materials and reliance on non-EU regions for critical materials supply and 2) decreases waste and material in landfills.

## 3.1 Business Case

In several countries, recycling of solar panels is either taking place as a voluntary initiative by the industry, or under national legislation. For example, while the initiative is voluntary in the US, a number of individual States are looking towards mandatory recycling rates through legislation. Under the EU WEEE Directive a recycling mandate already exists for European member states. The EU has a recovery target of 85% and a preparation for reuse and recycling target of 80% for solar panels in place.

Other regions, such as Chile and India are looking at introducing regulatory requirements for recycling. Given the trend, it is probable that the global RE sector will move towards more recycling and end of life management legislation in the coming years. Therefore, business that can incorporate a recycling element at an early stage will be able to maintain operations in the future as well as gain a competitive advantage in access to markets where such requirements become mandatory.

### 3.1.1 The Good Practice Principle

Adapting a fully integrated responsible product life cycle approach as a business model allows for a firm to meet its voluntary and legal obligations on recycling as well as economic benefits by re-using recycled material in its manufacturing. The good practice elements can be defined as follows:

- Design an effective recycling system for solar modules that is based on a pre-funded principle to ensure financial costs for recycling are effectively met for the product.
- Conduct high value recycling to decrease the environmental impact of manufacturing.
- Decrease the levelized cost of electricity for manufacturing through an LCA business model.

### 3.1.2 Guideline Scope & Contribution

These guidelines are primarily applicable to solar panel manufacturers, seeking to build a recycling element into their business model. The case of First Solar, an American company providing photovoltaic (PV) energy solutions, is used to illustrate this good practice case. It has manufacturing and recycling locations in Malaysia, US, Germany and Vietnam, and offices in Belgium, Singapore, Japan, India and Brazil. First Solar is one of the largest solar panel manufacturers worldwide, with more than 25 GW of installed solar PV capacity and is leading in the production of thin-film cadmium telluride (CdTe) solar cells (Colville, 2019; First Solar, 2021). First Solar was the first company in PV industry to introduce a pre-funded collection and recycling programme for their EoL PV modules in 2005 (Corbley, 2020; Krueger, 2010).

It should be noted that First Solar's production of cadmium telluride solar cells is a specific feature for this company. This allows the firm to capitalise on certain aspects of the recycling process. However, the general guidance provided in this chapter can be used by other solar panel manufacturers as well. The guidelines presented explain the basics for using a LCA approach by designing a recycling inclusive, financed product offering for clients of solar panel manufacturers.

The next section outlines the basics of a LCA business model, followed by how First Solar created a financing model to support recycling on their panels. The final section highlights issues for consideration for firms looking to follow an LCA approach.

## 3.1 Creating a Life Cycle Assessment Business Model

Adapting a LCA approach requires the business to fully understand the environmental impacts of its production cycle, from the mine site to the end of the product's life. In the case of First Solar, this understanding led to a more environmentally sustainable approach across its production cycle that included:

- Material sourcing: Converting mining by-products into a stable semi-conductor
- Product design: Designing for high-value recycling
- Manufacturing: Manufacturing with less energy, water and GHG emissions
- Product use: Faster CO2 reductions and greater return on energy invested
- High-value recycling: Recovering over 90% of material at end-of-life use[14].

LCAs can be assisted by using the eco-design process and environmental hotspot analysis for both the inputs for the product as well as where the product will be deployed. Analysis indicates that the more important hotspots are linked to the material footprint of the input. Quite a few of these hotspots can be addressed through extended producer responsibility and through implementing high volume recycling.

At the other end of the life cycle is what happens to the product once it has been used; the product can either take the recycling route or be disposed. Recycling is a cost to a business, from the logistics of collecting used equipment for recycling, to the cost of the recycling process itself. For materials that

[14] First Solar: Andreas Wade Presentation

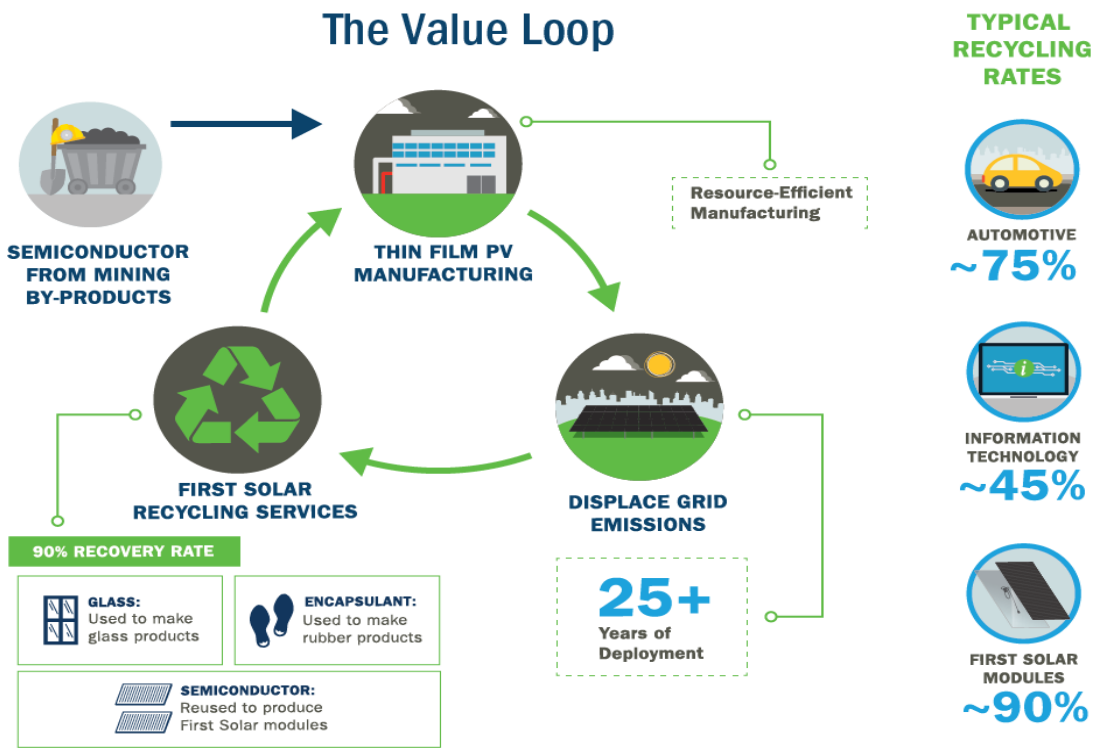
cannot be re-used within the manufacturing process, recovered material (waste or secondary material) will need to be disposed or sold, again at a cost.

Given the costs associated with recycling and disposal, a business model that can offer a cost competitive solution for clients buying solar panels, can be a competitive advantage for the firm, as well address a challenge within the renewable energy sector.[15]

### 3.1.1 Reducing Primary Raw Materials Intensity

The first step is to consider lowering the intensity of use of primary raw materials by incorporating secondary materials in the manufacturing process. For example, First Solar implemented circular material flows for their PV panels to decrease their primary raw material intensity by using secondary materials from their own panels (see Figure 4). To achieve a reduction in primary material-use intensity, high recycling rates are required and hence the design for recycling needs to be considered at the product design stage and how this will feed into the manufacturing processes.

Figure 4: Circularity at First Solar




Source: First Solar (2021)

First Solar's approach has allowed them to recover approximately 90% of glass, metals and semiconductor materials used in their thin-film PV panel. The semiconductor material can be reused 41 times (equal to more 1,200 years PV lifespan assuming an average life of 30 years) before the material is somewhat dissipated in the losses - this corresponds to 95% recovery efficiency, the only

[15] For more details on these challenges see the State of Play & Roadmap Concepts: Renewable Energy Sector (2021)

limiting reutilization factor (First Solar, 2020). By increased recycling rates, the firm can include more secondary material inputs.

**Good Practice**: Consider the life cycle assessment approach to determine the reduction in primary material use, replacing it with secondary materials. Incorporate secondary materials use as part of the product design process and the manufacturing process.

### 3.1.2 Commercial Scale Recycling Facilities

To ensure secure access to secondary materials for the manufacturing process, First Solar has constructed commercial scale recycling facilities at each of their manufacturing sites (US, Malaysia, Vietnam, and Germany). Since the first introduction of the firms' global recycling system, continuous improvements have been undertaken to decrease recycling costs and increase capacity. Currently machines can handle 150 tonnes of panel material per day. This capacity is adequate for an amount of 70,000 newly installed panels per day. The World Economic Forum (WEF) estimates an installation rate of 70,000 solar panels every hour until 2023 (McKenna, 2018).

To further reduce their emissions, the recycling process uses renewable energy from PV installations and water required for the separation and rinsing of materials is treated and reused generating zero wastewater since 2008 (First Solar, 2020).

**Good Practice**: To ensure secure access to secondary materials, consider setting up recycling facilities at manufacturing sites at a commercial scale that allows requisite materials to be recycled. Consider further improving the products carbon footprint by incorporating renewable energy and water efficiency within the recycling process.

## 3.2 Financing the Recycling Element of the Value Chain

Collection, transport, and recycling can have a high financial cost. To address this, a financing option can be built into the product offering itself. For example, when selling solar PV modules, module agreements between the customer and First Solar are signed that specify the recycling process of the module. The consumer can either choose First Solar's recycling programme, or another programme that meets the respective legal requirements in the country of installation. If the recycling process provided by First Solar is chosen, the customer is required to inform the manufacturer as soon as the module reaches its EoL. The customer is responsible for dismantling and packaging of the module according to guidelines provided by First Solar. First Solar provides the packaging material and will then collect and transport the module to processing centres.

**Good Practice**: Offer customers and clients fully costed recycling options, that are based on realistic, clear commitments and are backed up by funds that will continue to be available even if the firm is no longer in operation.

### 3.2.1 Consumer Targeted Return Schemes

In 2005 First Solar established a pre-funded recycling system. The aim was to develop a financing plan to ensure that sufficient funds are always available to take back and recycle First Solar modules. This financing plan is additionally secured by First Solar through pre-financing. The principle of producer responsibility is applied. This means that when a module is sold, funds are already set aside to cover the collection and recycling costs. First Solar invests these funds in a special fund managed by a large

international insurance company. This means that the collection and recycling costs are covered in any case, regardless of First Solar's financial situation.

This financing program was discontinued at the end of 2012, apart from the EU market where PV manufacturers are obligated to provide a free of charge collection and treatment program according to the WEEE directive. Instead, a new program called the "Recycling Service Agreement" was initiated. Under this scheme recycling contracts are offered to customers with a guaranteed price for a two-year period, committing First Solar's customers to the recycling of their PV modules. After each two-year period a new contract is offered, enabling the customers to profit from decreasing recycling costs. This pay-as-you-go model is available on a global scale.

Customers are not obligated to use the recycling programme offered by First Solar, but they can choose other recycling providers or responsible disposal. Additionally, First Solar allocates budget to upgrades of the recycling process on a regular basis to improve, technologies and processes while decreasing costs. Since 2005 technology improvements lead to a cost reduction of more than 50%. The aim is to become more economically attractive than disposal increasing the attractiveness of a sustainable EoL management for customers (Hagendorf et al. 2017).

Good practice: Design a customer focused product offering that considers the financial aspects of recycling and leads to increased voluntary customer participation in company's recycling strategy to support its LCA business model.

### 3.3.1 Considerations for High Value Recycling

High value recycling refers to creating enough volumes and sales potential for recycled material to be profitable. For companies to include recycling within their business model, it is important to consider the economics behind decommissioning solar panels. To calculate the costs for high value recycling, companies need to consider the direct costs (such as labour and equipment) and indirect cost of PV plant de-installation, demolition, recovery and land reclamation. Also, to be considered are the PV module recycling costs, landfill disposal costs (including landfall tipping fees and haulage of non-salvageable material).

In addition, the scrap value of metals – steel, copper, aluminium - that is recovered during PV solar field and power equipment removal should be included in assessing the value of recycling.

According to the research by First Solar, the inclusion of the value of reclaimed land, all high value recycling scenarios results in benefits to the firm. Even when land is excluded, 90% of the scenarios result in benefits.

These calculations are based on the understanding that recycled materials are marketed as secondary materials and not as waste.

A re-use scenario is highly unlikely and high value recycling offers better economics.

A firm making these calculations can provide an economic case to its own shareholders as well as make a case to clients on the benefits of financing recycling of solar panels[16].

[16] For full explanation of how decommission economics applies, please see Andreas Wade's presentation

**Good Practice**: To support the case for high value recycling, firms should calculate the cost and benefits associated with decommissioning of solar panels. These calculations are more likely to indicate an economic as well environmental benefit for the firm.

## 3.4 Impact

A life cycle assessment-based model, as used by First Solar, has provided the firm with several benefits, which include:

- Decreasing primary raw material intensity by using secondary materials from their own solar panels.
- Compliance with recycling regulations of both manufacturer and customer.
- Since 2005 technology improvements led to a cost reduction of more than 50%.
- Lower levelized costs of electricity[17] for the firm in its manufacturing process.
- Social license to operate in the regions linked to its positive approach to decreasing environmental impact
- Recycling contracts with customers guarantee a stable price for a two-year period for the recycling of their PV modules. Afterwards a new contract is offered, enabling the customers to profit from decreasing recycling costs.

## 3.5 Key Considerations in Operationalising a LCA Model

Based on the case of First Solar, there are certain considerations a firm should plan for, to support the return of products, such that secondary materials can be recovered for the manufacturing process.

**Product offering**: At the time of sale, the product offering should be clear and encased within a legal contract that clearly details the agreement between the customer and manufacturing company on end-of-life product management. The manufacturing firm should set aside funds at this stage to cover the collection and recycling costs.

**Return of product**: When the end-of-life status for the product has been reached, the customer, by contract, should be required to inform the manufacturer. The customer is required to dismantle and package the modules. In the case of First Solar, the company provides packaging material, collects, and transport the module to its processing centres. The easier and clear this process is made, the better the collection rate is going to be.

**Key considerations**

- Include recycling as part of the product offering to clients
- Ensure the return of products is a managable process for customers
- Address the enviornment, health & safety issues related to recyling.

[17] Levelized Cost of Electricity (LCOE) is an economic measure used to compare the lifetime costs of generating electricity across various generation technologies.

**Environment, safety & health considerations**: One of the issues related with recycling solar panels are health and safety concerns. Recycling centres must have the appropriate capacity to address these. In the case of First Solar, they use cadmium & tellurium which are toxic elements. All of their manufacturing and recycling facilities are certified to OHSAS 18001, ISO 14001, and ISO 9001. Another concern is environmental impacts and appropriate steps must be taken to address these. At First Solar Air emissions are controlled using a HEPA filter system. Since 2018 the recycling plants generate zero wastewater. The water is treated and recirculated into the system.

Additional Resources:

- RE-SOURCING Flagship Lab: Case Presentation by First Solar (2021)
- RE-SOURCING Flagship Lan: First Solar Case Description (2021)
- First Solar: Knowledge Center
- RE-SOURCING Roadmap Workshop: The Renewable Energy Sector (2020)
- RE-SOURCING Report: State of Play & Roadmap Concepts: Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Identifying Challenges & Required Actions for Responsible Sourcing in the Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Responsible Sourcing: The Case for Business Competitiveness (2020)

# 4 Supplier Assessment Through Shared Resources

Within the larger sustainability and responsible sourcing global agenda, increasing calls for evidencing RS practices is growing for lead firms and manufacturers.[18] Given the complex nature of RE value chains, it is not enough to focus on the RS performance of the lead firms only, as this provides an incomplete picture of the sector's performance. Given the purchasing power of lead firms, they are ideally placed to work with their multiple suppliers to: 1) increase the uptake or RS practices across the sector; 2) create a level playing field within the supply industry such that a minimum (higher) RS practice standard is met.

Lead firms and their suppliers are linked to sectors other than RE. The resultant multiple standards, legislative requirements and reporting templates leads to a cacophony of reports that need to be compiled. This exercise can become counterproductive, with suppliers hesitant to spend the resources to meet the increasing demand for reports, particularly when they are not under a legal requirement to do so.

One approach to addressing this issue, for both lead firms and suppliers, is to create an initiative which can collectively agree on the RS practices to be addressed, formulate an approach for this assessment and conduct the assessment on behalf of all parties. The initiative can pool the results for all involved, thereby capitalising on the resulting economies of scale.

## 4.1 Business Case

Large scale companies, such as those in the chemical sector, supplying inputs to solar panel manufacturers, can have several suppliers, ranging from the hundreds to the thousands. For a firm to individually carry out such RS assessments on tier-1 to tier-n suppliers would be costly and time consuming. With limited equivalence across schemes and differing reporting templates for RS standards, compliance and resource efficiency could be improved by designing a systematic, standardised assessment tool for an industrial sector, such that all involved actors can benefit from a streamlined and standardised process.

Centralising the assessment process and sharing results amongst lead firms carries an economic advantage as well as increasing the uptake of RS practices along supply chains. Additionally, suppliers have more incentive to join an assessment scheme that allows them access to a larger market of potential customers. Such a system would reduce the administrative burden for individual businesses, while providing third-party assurance for sustainability performance.

### 4.1.1 The Good Practice Principle

Standardising information requests, reporting templates and assurance mechanisms across a sector can lead to efficiency gains and wider uptake of RS practices. Therefore, developing and implementing a uniform supplier assessment mechanism for a sector is considered good practice. Such a process involves:

[18] See The International Responsible Sourcing Agenda Report (2020) for more information

- Understanding the advantages for a lead firm procurement department to be able to access a large supplier assessment database.
- Engaging with suppliers to undergo a joint, standardised assessment, as an efficient use of their resources
- Through consultation, designing an effective and comparable standard and assessment mechanism that can address industry concerns.
- Choosing an independent third-party with assessment experience to administer the initiative.

### 4.1.2 Guidelines Scope & Contribution

The guidelines presented in this chapter primarily address procurement departments in lead firms and customer relationship managers in supply firms. Firms seeking to combine efforts and standardise reporting requirements across their suppliers and value chains can also benefit from the good practice examples discussed in this chapter.

The combined supplier assessment initiative is illustrated by the case of Together for Sustainability (TfS), an initiative in the chemicals sector that uses an audit and assessment mechanism to provide assurance on RS practices to its members.

The next section outlines the good practice case of TFS, followed by a description of the steps involved in using a combined supplier assessment scheme. The final sections in this chapter address the considerations for those looking to develop a similar approach.

## 4.2 Together for Sustainability Initiative

Together for Sustainability (TfS) offers a standardised assessment and audit process for lead firms and suppliers in the chemical industry. In 2011, 23 chemical companies came together to form the initiative, in collaboration with the European Chemical Industry Council (Cefic). By 2021, there were 31 members.

The TfS scheme was built in collaboration with the chemical industry and reflects the needs from lead firms to evidence their sustainability commitments. The product offering allows the sharing of results with multiple clients and reduces the effort and costs for suppliers to meet assessment requests.

Additionally, the initiative has been constructed in a way to allow for suppliers to identify issues requiring improvements and Corrective Action Plans are also worked on with the suppliers.

TfS applies an equivalence to Safety and Quality Assessment for Sustainability (SQAS) certification, thereby reducing duplication efforts on part of the suppliers. Additionally, TfS audits can be combined with other audit subjects such as product quality, quality management systems and other regulatory compliance measures.

The TfS provides two levels of assessments – the first is based on self-reporting and is carried out by its partner EcoVadis. The second and higher level of assessment is the TfS Audit, which is discussed in more detail here.

### 4.2.1 Characteristics of a TfS Audit

A TfS audit is a standardised audit process covering five aspects of sustainability procurement (see Table 3)[19]. All members can access the database for supplier audit results, thereby decreasing time & effort for suppliers and procurement departments. The audit is not meant as a certification exercise with pass/fail results. Depending on the results the supplier and client (lead firm) will work together to continuously improve performance. The audit always assures supplier confidentiality, and they have control over their assessment results. The audit results are valid for one to three years, depending on the results.

Table 3 Sustainability issues covered by a TfS audit

| Management | |
|---|---|
| • Management in charge<br>• Management Systems, Policies & Continual Improvement | • Training<br>• Business partners/suppliers & contract managers |
| **Labour & Human Rights** | |
| • Child Labour<br>• Forced & Compulsory Labour<br>• Working Hours | • Minimum Wages<br>• Freedom of Association<br>• Discrimination |
| **Health & Safety** | |
| • Product Safety<br>• Transportation Safety<br>• Process Safety & Storage<br>• Occupational Health & Safety | • Emergency Preparedness<br>• Medical Care<br>• Security |
| **Governance** | |
| • Business Integrity<br>• Privacy & Intellectual Property | • Fair Competition<br>• Disciplinary & Complaint Procedures |
| **Environment** | |
| • Environmental Compliance<br>• Waste<br>• Water & Wastewater<br>• Soil & Groundwater<br>• Emissions to Air & Climate Change | • Energy<br>• Land Use & Biodiversity<br>• Nuisance (noise & odour)<br>• Hazardous Substances |

*Source: Compiled from information on TfS website <accessed 24 June, 2021>*

### 4.2.2 The Audit Process

The audit process can take approximately three months, depending on the supplier size and location. Additionally, the lead firm can request only a particular business unit of the supplier be audited rather than the entire firm. The audit is carried out be a certified independent firm.

**Supplier selection by client**: The lead firm defines its supplier audit strategy and communicates this to its suppliers.

**Supplier invitation from client**: The nominated supplier is consulted about undergoing a TfS audit. A supplier can choose to confirm (or deny) a request for an audit. Once confirmed, the supplier is then invited to particate in the audit.

[19] A full list of issues addressed can be found here.

**TfS audit preparation**: As part of the audit preparation, a supplier is offered guidance and preparation material through the TfS Supplier Academy. An audit company is selected, contracts are formalised and dates for on-site/remote visits are agreed. The suppliers pay for the audit firm. Pre-audit information is provided to the supplier, including a list of documents that will need to be reviewed. A Data Sharing Agreement is signed that will determine the use of the information from the audit.

**Supplier audit preparation**: To prepare for an audit, TfS requires general information about the site, to be completed by the suppliers. Information on all steps to be completed before an audit is provided to the supplier, including a list of documents that may be required by the auditors.

**The audit**: The audit process itself involves an opening meeting, site tour, interviews with employees, document reviews and a closing meeting.

*Closing meeting & findings*: The findings of the audit are discussed with the supplier and finalised during this meeting. The auditor then reports the status to the TfS Office. The results of the audit are likely to follow in one of these categories:

- Minor: a concern of low priority
- Major: a concern of high priority
- Critical: a concern of immediate high priority

*Result sharing & Corrective Action Plan (CAP):* The auditors will prepare the audit report, that will initially be shared with the supplier. Depending on the results, a Corrective Action Plan is discussed with the supplier and a final audit report is prepared. After going through a quality review, the audit report is loaded to the database, where it can ace accessed by all members of the TfS.

## 4.3 Steps in Creating a Combined Supplier Assessment Database

Several lead firms operate individual/internal supplier databases, where details on supplier capabilities and increasingly sustainability linked performance assessments can be accessed by procurement managers. The concept of a combined supplier assessment database takes this to the next level, where a shared database is created, accessible for all lead firms.

Such an initiative has a strong commercial element, both in terms of being a paid service as well as ensuring security of commercially confidential information. This section outlines the steps required for creating such a shared information platform.

### 4.3.1 Finding Like-Minded Lead Firms

A combined supplier base operates on economies of scale – an initial group of lead firms must agree to combine efforts to create such an initiative. This can be done through existing industry alliances and chambers as well informal conversations with procurement managers from other firms. Forming a working group to discuss ideas and take decisions on next steps would be recommended once an initial group of like-minded lead firms has been identified.

### 4.3.2 Identifying Assessment Specialists

The working group should identify assessment specialists that have the experience in auditing and assessing suppliers in their industry. These firms can be selected from assessment specialists already used by lead firms or through a market research exercise. In seeking assessment specialists, the

working group should focus on those who have demonstrated capacity in carrying out standardised assessments and have the administrative capacity to construct and manage a large supplier database. It should be noted that eventually, the supplier database will need to be hosted by an external/independent organisation and not a lead firm to avoid any commercial conflicts of interest.

### 4.3.3 Agree on Standards to be Assessed

In consultation with assessment specialists, the working group needs to identify, prioritise, and agree on the RS practices that will be assessed. Lead firms can look at their internal reporting requirements, consult external standards, guidelines and templates as well as engage with key suppliers to draft a list of performance indicators to be assessed. In the drafting of these performance indicators, it is important to note that these will be standardised across all suppliers and therefore should meet the needs for all lead firms. However, the list should be balanced and parsimonious and not include every conceivable performance indicator. One approach could be to classify performance indicators as essential and optional – allowing supplier firms some flexibility on reporting on indicators.

### 4.3.4 Agree on Assessment Mechanisms

Once a list of performance indicators has been agreed, the next step is to decide on how these will be assessed. Assessment mechanisms can take the form of audits or self-reporting. They can be conducted through on-site visits, review of company documents and survey questionnaires for suppliers. Equivalence to existing certifications (such as ISO Certificates) should also be considered at this stage. The assessment specialist can provide the appropriate guidance on the strengths and weaknesses of the assessment mechanisms being proposed.

Different levels of assessment can be built into the same initiative, providing suppliers with the option to progress from self-assessment at the start, moving to third-party auditing as they gain more experience with assessments. Section 4.3 provides an example from the TfS Audit Scheme on what an assessment mechanism can look like.

### 4.3.5 Agree on Analysing Assessment Results

To ensure uniformity in approach, the working group needs to agree on how the results from the assessment will be utilised, to convey a uniform message to suppliers. Increasingly, lead firms are moving away from a pass/fail approach to assessments. Instead, these processes are being used as diagnostic tools, to pinpoint areas of success and those that require more work. In the case of TfS, Corrective Action Plans (CAP) are designed in cooperation with the supplier to address areas of weak performance. It is important to clarify and agree how assessment results will be used by all lead firms, otherwise it can discourage suppliers from joining the initiative.

### 4.3.6 Agree on Access to Information

In consultation with suppliers, the working group should also consider how access to information on assessments will be managed. It is important to assure suppliers some control over their assessment information and that such assessments will only be shared through their consent. Additionally, while lead firms may find building a joint supplier base advantageous, there are also risks to commercial conflicts of interest between lead firms. Therefore, the rules on how much information from a single lead firm's supply chain will be visible to other lead firms will need to be discussed and agreed.

### 4.3.7 Pre-Engagement with Suppliers

For such an assessment initiative to be successful, suppliers need to be included in the consultative process. Such engagement can be informal (through bilateral engagement), involve focus groups, workshops with the working group etc. In these pre-engagement sessions suppliers should be consulted on the proposed performance indicators, assessment mechanisms and approaches to using assessment results. Additionally, discussions on what information will be collected and how it will be shared is also important. It may also be pertinent to gauge the level of support, both in terms of training and financial support, that may be required to bring suppliers on board.

### 4.3.8 Costing the Initiative

Such an initiative is likely to be viable under a commercial agreement with an assessment specialist. The working group needs to consider the cost advantages of outsourcing the assessment exercise to a third-party relative to the cost of doing such work in-house or through individual audits of suppliers. They also need to consider the costs for suppliers to go through an assessment process and the appropriate fee for them to access this service. A third option is to create a non-profit entity that operates the assessment scheme, and efforts will need to ensure that it is able to maintain its financial viability to operate for a given time.

### 4.3.9 Modifying the Initiative

Where an initiative has been built from the ground up, two to three years may be required to bring it to full running order. As the standards and assessments are implemented, practical and administration issues may arise that will require adjustments in the original plan for the assessments. Case studies with select suppliers could also be used at the early stages to fine-tune assessment approaches. The assessment approach should be kept flexible and allow the initiative to evolve based on feedback from suppliers as well as changes in the larger sustainability and RS landscapes.

The guidelines provided here are pertinent for building an initiative from the ground up. The working groups may also choose to identify initiatives already operating in other sectors/focus areas that can be adapted.

### 4.3.10 Expanding the Initiative

Once the original working group is satisfied with the assessment process and its results, the initiative can be expanded to include other lead firms as well as more suppliers. Suppliers may be hesitant in joining an initiative, either because they do not see the benefits or are unsure of the costs associated (both internal and fee payments). Outreach activity, both formal and informal, will need to be undertaken to explain the mechanism, benefits and costs of joining a common supplier assessment database. The assessment specialist should also consider developing training modules for both the lead firms and suppliers into their offering.

**Good Practice**:

- Supplier database should be hosted by an independent third-party to ensure confidentiality of information and avoid conflict of interest between lead firms and between suppliers.
- Assessment mechanisms should range from simple assessments (self-reporting) to third-party audits.
- The results from assessments should be used to create positive change in performance and not as a pass/fail exercise.
- Provide control over assessment information/results to suppliers, addressing how it will be used in the database.
- Consultations and engagement with suppliers in drafting the framework for standards and assessment mechanisms.
- Ensure the initiative is properly costed and has plan for its financial self-sufficiency.

## 4.4 Impact

The impact of creating a shared supplier assessment database can be seen at three levels:

**Supplier benefits**: By responding to a standardised assessment scheme, suppliers (particularly SMEs) can reduce the administrative burden and resource use for reporting on their RS practices. This avoids double audits and can also improve the quality of the audits that are carried out. With the Corrective Action Plan, any issues diagnosed during the assessment can be addressed, allowing the firm to meet the requirements of multiple clients through one agreed action plan rather than necessitating individual actions for each client.

**Lead firm benefits**: Lead firms save resources and administrative burden by no longer having to audit suppliers individually. With a shared set of suppliers, assessments conducted for other lead firms can be equally accessible for the group, allowing for scale efficiencies.

**Box: 2 Performance of TfS**

- 16,000 supplier evaluations (since 2011)
- 751 TfS audits
- 31 members (chemical firms) with €356 billion turnover
- Includes audits of firms from Europe, China, Japan, India, US and Brazil
- 57% of suppliers improved after re-assessment
- 75% of suppliers improved after follow-up on CAP or re-audit

Source: TfS Activity Report (2020)

**Industry/Sector benefits**: The greatest benefits of a combined supplier assessment database occur at the sectoral/industry level as it allows for economies of scale to be utilised. Where lead firms agree on a given assessment criteria, they contribute to standardising RS performance, thereby encouraging a level playing field for themselves and their suppliers. Where more suppliers and lead firms join the initiative, greater uptake of RS practices across the sector takes place – increasing the sustainability performance of the larger group. It harmonizes requirements to manage risk and reduce complexity to benefit all stakeholders. Given the nature of the initiative, it can be constantly improved through a collaborative process, based on a pro-active and long-term engagement and continuous improvement.

**Box 3: A Lead Firm Perspective**

Wacker AG is one of the largest chemical companies in Europe and supplies chemical inputs to the RE sector. Wacker joined TfS in 2015 and was seeking assurances that its geographically dispersed supplier base was following acceptable sustainability standards in their operations. Wacker identified 500 'key suppliers', with the aim of evaluating their sustainability performance via TfS. These key suppliers accounted for 65% of all suppliers and over 80% of the global procurement volume. In 2018, 60% of the firm's global procurement volume was covered by TfS – for raw materials and energy, the coverage is around 80%.

When the TfS assessment results are unsatisfactory, Wacker engages with its suppliers on working towards improvements. To follow up on progress, reassessments or repeated audits have been used, resulting in improvements for roughly 60% of affected suppliers.

*Source: Wacker AG Sustainability Report (2018)*

## 4.5 Key Considerations for Practitioner

This section outlines key considerations, issues and challenges, firms and industry leaders should deliberate in taking up the good practices described in this chapter.

### 4.5.1 Assessment as an Improvement Tool

The purpose of creating a combined assessment database is to benefit from improvements in supplier performance and the tool should not be used as a pass/fail exercise. Suppliers will be hesitant in joining such an initiative if they believe that negative assessments could lead to loss in business opportunities. The assessments should be used and promoted as a means for diagnosing problematic areas and devising action plans (together) to improve the situations.

### 4.5.2 Build Engagement Strategy

Initial hesitance by suppliers to undergo assessments or audits has been noted, particularly when it is not required under current regulations. To increase supplier uptake for such an initiative, engaging with current and potential suppliers is essential. Without an adequate number of suppliers in the database, economies of scale would not be reached. It is also advised that suppliers join voluntarily and not as a mandatory requirement for conducting business with the lead firms. Suppliers can be encouraged through conversations about the wider sustainable policy landscape, sectoral specificities, geographic/country scope, how compliance is an advantage and can provide competitive advantage

and most importantly improve the performance and operations of the firm. It should be communicated that the audit is a starting point of a journey toward sustainability.

### 4.5.3 Designing Training Material

It has been noted that suppliers, particularly small firms, may struggle to understand and comply with the requirements of an assessment or audit, including preparation of documentation and conducting on-site visits. Training materials should be planned as part of the launch of the initiative to remove hesitancy in agreeing to an assessment. Training also serves the additional advantage of allowing suppliers to be comfortable and prepared with the assessment process.

### 4.5.4 Standard Simplification

In setting the performance standards to be assessed the key is to focus on assessment indicators that are found in current approaches and/or already being employed by lead firms and other standardised certifications. The goal is to simplify the standard reporting requirement and not to create yet another reporting template for suppliers. Where equivalence certificates are found, these should be noted as acceptable.

### 4.5.5 Procurement Managers

The process should ideally be led by the procurement officers from lead firms, as they have the greatest overview on all requirements from suppliers, not just sustainability indicators. The procurement requirements cover product quality, delivery and logistics, costing and a technical set of different indicators. The sustainability assessment is expected to fit alongside existing processes and product specifications and should not be introduced as a silo in the procurement process. This does not suggest that other departments should not be consulted or contribute to the expectations from suppliers on sustainability matters.

**Key considerations**

- Use assessment as a tool for improvement
- Supplier engagement stratgies need to developed
- Desing training material for suppliers on the assessment
- Provide a coherent, yet not overburdensome common stanard for assessment
- Inclusion of other procurement considerations in designing the assessment

Additional Resources:

- RE-SOURCING Flagship Lab: Case Presentation by TfS (2021)
- RE-SOURCING Flagship Lan: TFS Case Description (2021)
- TfS: Supplier Academy
- RE-SOURCING Roadmap Workshop: The Renewable Energy Sector (2020)
- RE-SOURCING Report: State of Play & Roadmap Concepts: Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Identifying Challenges & Required Actions for Responsible Sourcing in the Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Responsible Sourcing: The Case for Business Competitiveness (2020)

# 5 Consultative Approach to Designing National Mining Policy

The RS agenda of extractive companies and downstream smelting and refining operations is largely determined by three essentials: 1) the national legislation & regulation of jurisdictions they operate in; 2) sustainability standards required by their clients and 3) industry voluntary standards they have committed to. In this chapter, the guidelines discuss the first of these elements. National legislation should ideally reflect the wishes of the country's citizens and the aspirations of its government. However, different stakeholder groups cannot always agree on the means and ends of sustainability strategies. For example, even to the question of whether mining should be allowed on certain lands, communities directly impacted by the operations will have different opinions to those in urban centres who will consume these minerals while not directly being affected by the environmental impacts of their extraction.

Balancing these RS approaches and needs of many stakeholders in a national mining policy document can be a challenge to governments. A government also needs to ensure that all companies operating in its jurisdiction meet the same level of sustainability practices, rather than reflecting different practices based on their operating headquarters. Therefore, a national mining policy, that reflects the needs of the stakeholders and levels the playing field on RS topics for all operators in the country, is considered good practice.

## 5.1 Business Case

A national mining policy, based on consultations and consensus building considers all inputs/viewpoints from the start and allows for a better-informed sustainable mining policy. This also limits the 'frequency' of changes that will be required to update the policy later, to incorporate issues that may have not been considered.

### 5.1.1 The Good Practice Principle

Given the plethora of standards, civil society initiatives, federal vs. provincial level legislative requirements and differing RS needs of different segments of society, a good practice principle is to arrange for a national consultative process before the drafting of a national policy, rather than initiating a consultation after a policy has been drafted. This process consists of the following elements:

- Designing and implement an inclusive and nationwide consultation process for a mining policy.
- Capitalising on the benefits of an inclusive and multi-phase consultation process for policy development.
- Creating a consultation process that allows for discussion and insights into strategic choices, challenges and success factors of a national mining policy addressing RS.

### 5.1.2 Guideline Scope & Contribution

The guidelines are primarily directed at government agencies that are responsible for drafting national mining policy and consultation processes. These can be used at a provincial level, depending on the

regulatory nature of the country (federal vs. state level management of mining policies). These guidelines should assist government agencies in designing an inclusive, consensus building approach to policy formulation.

To illustrate this good practice, the chapter uses the case of the Chilean National Mining Policy. Mining is a central pillar of Chile's development. For the development of a national mining strategy, the country chose to develop an institutional framework to ensure a sustainable development approach for mining. The objectives of the government included aligning the new mining policy with modern guidelines for sustainable development, balancing economic development, social aspects, and environmental protection.

For its consultative process, the government's aim was to get widespread buy-in by all members of society, and reduce the risk for future criticism by different parties. The consultation involved stakeholders from the public and private sector (both national and international), unions, academia, civil society, indigenous peoples, students, mine workers, women and more.

Another aim of the consultative process was to address the negative perceptions of the population towards mining. This needed to be overcome in order to achieve the necessary levels of participation and ensure constructive input throughout the consultative process.

## 5.2 Steps in Creating a Consultation Process

### 5.2.1 Clearly Define the Objective of the Consultation Process

The consultation process is a means to an end, and the organisers of the process should clearly define the objectives of the consultation. Objectives can range from providing a platform for stakeholders to speak, it can be an information gathering exercise, it can be means for building consensus and acknowledging dissent amongst stakeholder. In the case of Chile, the consultation process was designed to provide content and direction for the drafting of the national mining policy. Therefore, it had a wide scope in terms of issues addressed as well as in terms of stakeholders targeted for consultation.

**Good Practice:** Create a multi-stage participatory and inclusive approach to establish a vision, goals and indicators for the mining policy. Draft a live memory/document that is continuously amended during the consultative stages to keep track of the overall process of the consultation.

### 5.2.2 Ensure Resources are Appropriately Allocated for the Process

Given the national scale of these consultations, appropriate resources in terms of time, human resources and financial outlays needed to be adequate to cover the consultation process itself.

Chile designed a two-year consultation, in four phases, to ensure all stakeholder groups could raise concerns and issues. This started with the central phase, that included over 150 experts to create a framework of relevant issues and areas of action i.e., the resulting four pillars of sustainability and the nine cross-cutting themes formed the thematic scope of the policy. Upon realizing that the central phase mainly included stakeholders based in the capital of the country, Santiago, the ministry decided to expand the consultation to give the opportunity to every interested citizen to participate. This resulted in the implementation of three subsequent consultative phases, which operated within the framework devised in the central phase.

### 5.2.3 Ensure Consultation Formats are Fit-for-Purpose

The nature of stakeholders differs, informed by political, economic and social power. The topic of interest for stakeholders will also be different. Should all stakeholders' interests in water rights issues be engaged in one consultation, should those interested in land rights and labour rights be consulted in the same meeting? Some stakeholders are more comfortable with power point presentations than others. These process orientated considerations should be planned for before the consultation process begins, to cater to the widest audience possible. More importantly, considerations need to be made to address the weakest members of the audience.

**Good Practice**: Take an approach that is open to input, critique and suggestions and presents an objective way of engaging with different stakeholders and their interests, regardless of background.

In the case of Chile, the consultations included different formats and opportunities for everyone to participate, regardless of their background. The formats included participatory workshops (online and physical), round tables, online surveys and technical, expert-led working groups.

The government was cognisant of ensuring inclusiveness and transparency in the consultation process. The ministry actively monitored participation from representatives of all stakeholder groups. A list of participants was continuously updated, to identify the potential under-representation from specific stakeholder groups. As a result, the ministry implemented additional sessions to improve the balance in the participation of different stakeholder groups. For example, additional workshops targeted specifically at women, students and mineworkers were conducted. Bilateral outreach was undertaken to achieve the desired levels of participations in the consultation. In addition, citizens that did not have the chance to participate in any consultative phase could also provide the ministry with their input through an on-line platform, to be added to the relevant workshop proceedings.

**Good Practice**: The design and use of different participatory formats (round tables, online & territorial consultations, technical working groups) to enable nationwide participation.

### 5.2.4 Designing a Multi-Stage Consultation Strategy

Consultations at the national level cannot be rushed and the timeline for the process should leave adequate opportunity for issues to be addressed. At the national level, particularly in countries where urban populations are easier to reach than rural stakeholders, the timeline has to allow for effective consultations to be set up across the country.

The Chilean consultation consisted of four phases that were implemented consecutively to achieve high levels of citizen involvement and representation of all stakeholder groups.

| The four phases of the consultation | | | | | | |
|---|---|---|---|---|---|---|
| Central phase | → | Technical committees | → | Territorial phase | → | Virtual phase |

**Central phase:** The central phase set out to define the framework along which the consultation would be carried out. The central phase saw the participation of over 150 multi-stakeholder experts who worked in four so-called 'sustainability tables', with one table per sustainability objective. This process lasted from August 2019 to January 2020 and consisted of several physical meetings, and participants had the opportunity to submit written contributions to serve as input for the physical meetings.

In addition, a background document was provided with insights on the technical background of the different working tables (see section 5.2.5 for details). The work undertaken in the sustainability tables aimed to identify specific topics of sustainability and associated challenges for formulating concrete initiatives to address them. This phase identified four pillars of sustainability as well as nine cross-

cutting themes to effectively identify challenges and solutions within specific impact areas.[20] In a later stage of this phase, the results were open for comments by all participants so as to refine and prioritize identified challenges and initiatives.

The results of this phase were collected and drafted into a base document for the consultation, which was used as the starting point for the next consultation phases. It clearly structured the agreements reached by the participants on the most important challenges to address as well as the initiatives to do so.

**Good Practice**: Physical multi-stakeholder roundtables aimed at experts as an initial scoping exercise of challenges to be addressed. Asking for written contributions to a shared, 'living' document.

The Technical Committee phase was the next stage, and is discussed in Section 5.2.6

**Territorial phase:** The second phase of the consultation was the territorial or regional phase, with the ministry organising 18 regional workshops, with a special focus on mining regions (i.e., more than one workshop was held in mining regions).

Citizens that signed up to the workshops were asked to choose which sustainability theme they were most interested in and were given the opportunity to rank different issues according to their priorities. Using this information participants were split into working tables according to the issues they had prioritized. These working tables were given the objective to devise solutions to the previously identified and ranked challenges, such as water resources, environmental pollution, emissions etc.

These workshops saw a total of 801 participants, and resulted in 93 proposals. The majority of these proposals were along the themes of small and medium-scale mining, environmental sustainability and community engagement and local development. With a special focus on regulatory frameworks, water resources, encouraging the participation of local communities in mining related issues.

**Good Practice**: Online registration for the regional consultations required participants to indicate the topics they were most interested in, leading to better organised workshops.

**Virtual phase:** The third phase of the consultation was the virtual phase, which lasted for 2 months from October to November 2020. This phase of the consultation was open for anyone interested and consisted of two methods for collecting input on the nine cross-cutting themes. The virtual phase was useful in balancing stakeholder participation - the targeted invitations to specific stakeholder groups yielded better participation than physical meetings.

First, an online survey was available for interested person to provide their input/opinions on any of the nine cross-cutting themes. This survey was available for the entire duration of the virtual phase and helped to expand the scope of issues initially identified in the central phase. The survey asked respondents to prioritize the importance and challenges within the nine themes.

The second approach for collecting citizen input was in the form of online participatory workshops. In total, seven workshops were held, of which four were special sessions targeted especially at women, students and mineworkers.

The virtual phase of the consultation resulted in 31 proposals, with the majority of proposals relating to the themes of environmental sustainability, institutions and mining development, and innovation

[20] See sections 5.2.5 and 5.2.6 for elaborations on the 4 pillars and 9 cross-cutting themes

and value chains. There was a particular focus on mine tailings, water resources and the modernisation and strengthening of public institutions in the mining sector.

**Good Practice**: Designing a consultation phase with different engagement methods. These can include online surveys, virtual participatory workshops to encourage wide maximum participation, and targeted workshops for under-represented groups such as women, students and mine workers.

### 5.2.5 Addressing a Wide Range of Sustainability Topics

Given the number of issues and topics that can arise in consultations around RS and sustainability, a pyramid approach can be utilised, where the consultation starts with the identification of primary issues that are expanded in each set of consultations. RS related topics also tend to overlap; challenges and their solutions can be economic as well as environmental. A strong content team is required to track issues emerging during consultations such that both an overview and details being provided by the consultations are not lost in the process. In the case of Chile, in the central phase, four main sustainability objectives were identified.

1. Economic Sustainability
2. Social sustainability
3. Environmental sustainability
4. Governance for sustainability.

The consultation process led to a total of 160 actions for sustainable mining being proposed. To illustrate the consultation results, Table 4 shows four of the 160 suggested initiatives/solutions to resolve identified challenges.

Table 4 Proposals from the first consultation phase in Chile

| Pillar of Sustainability | Challenge | Solution/initiative |
|---|---|---|
| Economic sustainability | Strengthen innovation, development and research for sustainable mining | Encourage the creation of more spaces for validation and piloting of technologies in small and medium mining, as spaces for technological scaling |
| Sustainability in governance | Create a sectoral institutional framework in accordance with the challenges of sustainable development | Ensure the existence of a regulatory framework for the sector that encourages investment while protecting citizens' rights |
| Environmental sustainability | Efficient management of water resources | The mining sector needs to promote integrated management of water resources in the basins where it operates |
| Social sustainability | Participation of women, inclusive approach fostering diversity in the mining sector | Promote diversity and inclusion in the mining sector through gender training and education |

Source: https://www.politicanacionalminera.cl/wp-content/uploads/2020/06/Insumos-para-la-PNM-2050.pdf

At the second phase, the consultation process further opened up these suggestions. For example, the issues of Environmental Sustainability were discussed at a working table in the workshop in Copiápo (Atacama region), and covered the identified challenges, proposed solutions and the expected impact of these solutions on the environmental, social, economic and governance aspects of mining. Table 5 shows two examples of solutions identified in regards to the challenge of mining and water resources,

with short explanations of the implications these solutions will have in regards to the four pillars of sustainability.

Table 5 Example of proposed initiatives for addressing mining & water resource issues from consultations

| Challenge | Solution | Implication |
|---|---|---|
| Mining and water resources | Reorientation towards the reuse of water resources and circular economy | Environmental<br>- less use of natural resources<br>- avoid evaporation of tailings<br>- environmental efficiency<br>Social<br>- availability of water resources for human consumption<br>Economic:<br>- promote efficiency in the use of resources<br>- might result in extra investments to upgrade equipment |
| Mining and water resources | Review the process of granting water rights and align the regulation with evidence-based information on the condition of the water supply | Environmental:<br>- conservation of water sources<br>- conservation of ecosystem services<br>Social:<br>- less competition between users reduces the socio-environmental impact of mining operations<br>- prioritisation of water access rights<br>Economic:<br>- provides certainty on the rights to use certain water resources<br>Governance:<br>- regulations might need to be revised<br>- the prioritisation of water use rights needs to be analysed |

***Source:*** *National Mining Policy 2050 (2020)*

The third phase focused on refining challenges and solutions that were identified within the nine themes in the previous phases. Table 6 shows an example of challenges and related solutions within three themes.

Table 6 Identified challenges and solutions along three of the nine cross-cutting themes

| Cross-cutting axis | Challenge | Solution/initiative |
|---|---|---|
| Innovation and value chain | Development of the mining and materials value chain | Ensure operational continuity in the event of pandemics, natural disasters or other disruptive events |

| | | |
|---|---|---|
| Mining and environmental sustainability | Optimization plan for the sustainable and responsible use of water | 100% of the water used in mining should be treated or recycled |
| Small- and medium-scale mining | Regulatory framework, training and modernization of the small and medium scale mining sector | Establish effective training programmes for small-scale miners on safety issues |

**Source:** https://www.politicanacionalminera.cl/wp-content/uploads/2021/01/Sistematizacio%CC%81n-Fase-Virtual.pdf

**Good Practice:** Identify themes to better understand and contextualize issues and effectively address challenges in the four dimensions of sustainability in mining. These themes should cut across the four dimensions, i.e., address multiple sustainability dimensions. In this good practice example, nine cross-cutting themes were identified, for the consultative process to focus on.

### 5.2.6 Using Experts in Consultations

Consultations with a variety of stakeholders also include technical experts, academics and research institutions. Particularly for environmental and social issues that have technical aspects, the knowledge of experts should inform the consultation process.

In case of Chile, the ministry established one technical committee per cross-cutting theme, in order to consolidate the results of the previous phases. The work of these committees was essentially a fourth phase of the consultation. Each committee was led by an expert, tasked to lead the committee meetings and create a state of play document elaborating the identified challenges, propose initiatives and the goals which the mining policy should achieve.

In order to achieve a balanced representation, the invitation process for the technical committees was targeted at experts from every stakeholder group. A total of 210 experts participated in the technical committee meetings, which took place over a three-month period.

The technical committees produced nine technical reports, summarising and elaborating the outcomes of the previous phases of the consultation. During the drafting of the initial papers by the different technical commission leaders, a representative of the ministry continuously oversaw the progress to prevent significant overlaps in the actions/recommendations of the technical committees. The resulting reports will be used as inputs in the drafting of the national mining strategy. They address the following topics (the nine cross-cutting themes):

1) Institutions and mining development
2) Territorial development and citizen participation
3) Comprehensive labour relations and gender equity
4) Productivity and human capital
5) Value chain and innovation
6) Tthemes and public investment
7) Green mining (environmental sustainability)
8) Small- and medium-scale mining
9) Indigenous peoples

## 5.3 Impact

The Chile national mining policy is still being drafted, and can rely on inputs from nine cross-cutting themes to inform the process. The pre consultative nature of the policy contributes towards informed policy and strategy direction by the government. The consultation process also allowed for ‘buy-in’ from the stakeholders, contributing towards the transparency of the policy. By inviting stakeholders

to speak it could be assured of some measure of acceptance of the policy when it is released. Note, no policy can be designed that would appease all stakeholders on all issues.

In addition, this extensive consultation resulted in the identification of a very wide range of mining related issues and challenges as perceived by the country's citizens, and simultaneously collected a plethora of solutions/initiatives to address these issues.

The process also allowed the government to address the negative perception of mining in the country. This allowed the ministry to also raise awareness of the benefits of mining i.e., pointing out the different aspects of day-to-day life that are made possible through mined materials, such as using electronic devices or using renewable energy. In addition, awareness was raised on the destination of tax revenues from mining, for example 25% of the funds for social programmes are obtained through themes on mining activities.

The ministry was also able to reach out to mining companies with information on the consultation and the implications that the national mining policy will have. This was received positively by the mining companies, as most already had their own internal sustainability policies, and this prepared them to align these policies with the requirements of the national mining policy.

## 5.4 Key Considerations for Consultation Processes

### 5.4.1 Attendance by Stakeholders

Many people registered to the territorial workshops without showing up to the meetings, this resulted in the underrepresentation of certain stakeholder groups and certain issues. To rectify this, targeted invitations were sent out for the virtual phase and special sessions were organised to talk about underrepresented issues i.e., taxation and mining.

### 5.4.2 Under-representation by Indigenous Stakeholders

The initial invitation policy did not reach enough citizens from indigenous communities, the established communication channels were not enough to achieve desired levels of participation by indigenous peoples. It was suggested to use already existing networks or organisations of indigenous groups to effectively extend the invitation to the consultations. To respond to this shortcoming the ministry implemented a special indigenous people's chapter in the consultation, in order to ensure adequate consideration of the inputs provided by indigenous peoples.

### 5.4.3 Active Role for the Government

The ministry played an active role during the consultations through moderation of the working groups, presentations of results and continuous communications with the public. The different phases were advertised on the National Mining Policy portal and on social media as well as through regular newspaper articles on the current stage and next steps of the consultation.

**Key considerations**

- Ensuring a high register to attendance ratio
- Specific strategy to include under-represeted & traditionally marginalised groups
- Ministry/government needs to play an active role througout the process

Additional Resources:

- RE-SOURCING Flagship Lab: Case Presentation by Minister of Mining Chile (2021)
- RE-SOURCING Flagship Lab: Chile Consultation Case Description (2021)
- Chile National Mining Strategy website
- RE-SOURCING Roadmap Workshop: The Renewable Energy Sector (2020)
- RE-SOURCING Report: State of Play & Roadmap Concepts: Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Identifying Challenges & Required Actions for Responsible Sourcing in the Renewable Energy Sector (2021)
- RE-SOURCING Briefing Document: Responsible Sourcing: The Case for Business Competitiveness (2020)

# 6 Conclusion

The good practice principles discussed in this document address different stages of the RE Sector value chain. Each segment of the chain has a particular set of challenges and the selected good practice guidance focuses on issues that have the highest priority. To re-cap:

- Extractive companies: Design, implement and report through a cohesive corporate sustainability approach.
- Business model development: Develop a business model based around life cycle assessment, such that recycling and end-of-line issues are incorporated from the design phase of the product.
- Supplier assessment: Capitalise on the economies of scale by using a shared supplier assessment standard and mechanism through an independently operated supplier database.
- Consultative policy: Develop a consultative approach for drafting mining national policy that takes stakeholder viewpoints into account before the drafting process begins.

There are certain guidelines that are common across the four cases:

### Clarity of objective is paramount

The successful RS approach is based on having clear objectives of what the company/entity wants to achieve. These objectives should be a reflection of the firm/governments agenda and be internally driven and formulated. This does not mean that external guidance should not be included, but the good practice cases discussed here all point to an internalisation of the importance of RS, which is translate into objectives. Firms or governments which try and adopt external objectives, without internalising them to the firm itself, will tend to lack ownership over the RS process they initiate.

### Incorporate & use external guidance where appropriate

In the past decade, a large volume of guidance material in the shape of standards, guidelines, sustainability principles and reporting templates have been produced by technical experts, industry associations, civil society actors and governments. Those wishing to develop and refine their RS approaches should take full advantage of these expertise. While some stakeholders have raised the issue that there are too many guidance documents, nevertheless looking at established and upcoming externally developed RS approaches saves resources.

### Assigning responsibility for decision-making & actions

The decision to implement RS approaches must be taken at the highest level, usually the Board of Directors for a company and senior politicians in governments. However, once the decision has been made, the responsibility for developing and implementing these approaches must be conveyed and assigned to all member of the organisation (including its sub-contractors). The best practice cases identified in this document assign the responsibility across the organisation. Those companies who only discuss RS at the senior level, without involving mid-level, junior-level and front-line workers run the risk of implementation failure.

A second point of note is the importance of assigning monitoring responsibilities. These can be through external third-party assessments and audit schemes. However, monitoring mechanisms should also be set up inside the firms to note compliance.

### Reporting templates & processes should be well designed

With the growing demand from clients, investors, civil society and communities, the RS performance needs to be reported. The more standardised format this reporting take, the better our understanding of the extent of uptake of RS practices across firms and the level of these practices. Reporting should not be considered an after-thought in the RS approach development. When objectives are being designed the discussion should also consider how progress and achievement of these objectives will be measured and reported on.

### Designing the right tools

As noted earlier, there are many external standards and guidelines available for implementing RS approaches. Firms and governments need to give due consideration to the tools they provide their stakeholders in achieving RS standards. Sincere objectives with faulty policy will hinder the implementation of RS practices. The tools designed need to be cognitive of the resources (human and financial) available to the firm and the operating context and environment. Designing complicated tools with the means to implement them is a fairly useless exercise.

### Consultation with internal & external stakeholders on issues

Identifying the right stakeholders and right issues is of paramount importance and this can only result from a good consultation process. The best practice cases have shown that when such consultations are carried out at all stages of the RS approach and implementation development, the better the results. Consultations can take many forms, from industry association conferences to bilateral conversations with experts and other firms.

### Communication strategies are important

Communicating what the firm or government want to achieve, why and how they are pursuing RS agendas is important. The communications need to be targeted at the appropriate audience and be meaningful. Bad communication strategies can lead to labels of 'greenwashing' and promote mistrust among stakeholders. Too much emphasis on narratives and not on evidence can also cheapen the quality of communications. Actors should consider their communication strategy at the same time as they are designing their objectives and reporting mechanisms. The strategy should consider what information external stakeholders require as well as the information a company or government wants to convey to its audiences.

### Stepping away from silos in designing practices

One common theme noted across the best practice cases is a unified approach to sustainability and RS, whether it is in designing a national consultation process or a corporate strategy. None of the cases exhibit compartmentalisation – a focus only on the environment or on community issues. It is clear that RS is an overarching agenda and the approaches need to step away from silo thinking. While individual objectives and actions can focus on particular issues, the approach needs to be wider and illustrate inter-connectivity.

### The future of doing business

While different governments and companies are moving at different paces to address Climate Change and sustainability issues, it is important to recognise that they are all moving in the same direction. RS approaches ingrained in business practices will become more common. While initially successful RS approaches may set a company or a government apart, in the medium term these approaches are expected to become normal operating procedures. The better the uptake of RS practices, the more level the playing field.

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