IGF INTERGOVERNMENTAL FORUM on Mining, Minerals, Metals and Sustainable Development

REPORT ON THE PROPOSED PAYMENT REGIMES FOR DEEP SEA MINING:

Sponsoring state taxes and the taxation of capital gains

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Disclaimer

This paper is a technical document in response to a request by the ISA. It is based on the IGF Secretariat's expertise in Land Based Mining Taxation. It should not be understood to reflect a position of IISD, the IGF, or of IGF member states, on deep sea mining. The IGF Secretariat is not a party to the ISA and does not express opinions on any action taken by the ISA regarding the exploitation regulations applicable to deep sea mining.

Background

The 36-member International Seabed Authority (ISA) Council is currently negotiating the exploitation regulations of the ISA Mining Code. The exploitation regulations are set to be adopted by July 2023. This follows the country of Nauru triggering the treaty provision known as the "two-year rule," which obliges the ISA to finalize and adopt regulations for deep seabed mining (DSM) within 24 months. The financial terms of an exploitation contract between a contractor and its sponsoring state — a key part of the draft exploitation regulations—is yet to be defined (i.e., Part VII and Appendix IV of the draft exploitation regulations).

The Open-Ended Working Group (OEWG) of the ISA Council on the financial terms of contracts and the financial model and payment mechanism for DSM is tasked with determining a payment regime and rates of payment. The OEWG held its sixth in-person meeting in November 2022. The meeting focused on:[1]

- Draft text for a progressive, two-staged ad valorem royalty (Option 4; see Box 2 for all options)
- The valuation of manganese in the nodules. Deep-sea polymetallic nodules form on or just below the ocean floor. They typically contain manganese, nickel, cobalt, and copper.[2]
- The deduction of domestic and sponsoring state tax from (higher) royalty rates
- The financial implications of a potential tax on the direct and indirect transfer of rights.

OEWG meetings have been informed by a series of studies, including:

- A report from the Massachusetts Institute of Technology (MIT) on the regime options.
- A summary of earlier reports prepared by CRU and RMG Consulting entitled *Comparative Analysis of the Financial Aspects of Seabed Mining and Land-based Mining.*
- The 2020 *Study of the Potential Impact of Polymetallic Nodules Production from the Area on the Economies of Developing Land-based Producers of those Metals which are Likely to be Most Seriously Affected*.
- Detailed submissions from the African Group.

[1] https://www.isa.org.jm/wp-content/uploads/2022/12/Chairs_briefing_note.pdf
[2] CRU, 2019 Polymetallic nodule valuation: A report to the International Seabed Authority, https://www.isa.org.jm/wp-content/uploads/2022/12/CRU_ISA-Polymetallic-nodule-valuation-report_24Aug2020.pdf

ISA Council members are having difficulty reaching consensus on the payment regime options and payment rate levels that will both generate sufficient value for the common heritage of mankind (CHM) and reflect the principles and objectives of fairness with terrestrial mining interests as identified in the United Nations Convention on the Law of the Sea (UNCLOS) and the 1994 Implementing Agreement.

At the sixth OEWG meeting in March 2022, Council members requested that the International Institute for Sustainable Development, which hosts the Secretariat of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF), provide independent analysis of the payment regime options to aid with decision making.[3] Specifically, the ISA requested that the IGF examine the interaction between the proposed payment regimes and taxes paid to sponsoring states, as well as the African Group's proposal to tax the transfer of DSM rights and interests.

The IGF Secretariat supports more than 80 nations committed to leveraging mining for sustainable development. It has considerable experience advising its developing country members on taxation and administration for land-based mining.

The IGF Secretariat agreed to ISA's request to analyze the payment regime options, particularly the interaction with sponsoring state taxes, and present its findings at the forthcoming Council meeting in March 2023. To do this, IGF has built a financial model largely based on the model prepared by MIT. The model is provided in Appendix 1. It is an open-source model, built according to the FAST Standard (FAST Standard Organisation, n.d.), which means it is flexible, transparent, and can be modified or adapted by anyone with financial modelling skills. It should look particularly familiar to government economists in land-based mining countries, as it is based on the template of the International Monetary Fund (IMF)'s Fiscal Analysis of Resource Industries (FARI) model. The IMF FARI model is built under the FAST Standard to help governments of resource-rich countries analyze and benchmark fiscal regime options—for example, when revising the fiscal terms of a mining code or forecasting future resource revenue (IMF, n.d.).

This report is structured as follows: sections 1 and 2 describe the basis for the payment regime for DSM—that is, the legal mandate for the ISA to establish and implement the payment regime, and the related objectives and obligations. Section 3 considers what the ISA should be trying to achieve in terms of the overall financial return from DSM. Section 4 describes the four payment regimes the OEWG is considering. Section 5 uses the IGF financial model to evaluate the four payment regimes. Section 6 explores the interaction between the four payment regimes and any taxes contractors pay to their sponsoring state. This includes two proposals that aim to ensure that all contractors pay a similar level of tax regardless of how much (or how little) tax they pay to their sponsoring state. Section 7 provides a detailed evaluation of the African Group's proposal to tax the transfer or sale of DSM rights or interests. Section 8 shares some insights on good practice relating to fiscal stabilization. Section 9 concludes.

[3] https://www.isa.org.jm/wp-content/uploads/2022/12/Chairs_briefing_note.pdf

1. The Legal Basis for the Taxation of DSM

UNCLOS is the constitutional document governing DSM. It establishes the ISA (also referred to as the Authority) to regulate DSM. Specifically, Article 137(2) states that "all rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act." One of the ISA's responsibilities is to "provide for the equitable sharing of financial and other economic benefits derived from activities in the Area" (UNCLOS, Article 140(2)). To that end, it has the right to design and administer the financial terms of contracts between itself and sponsored entities, in accordance with UNCLOS and the 1994 Implementing Agreement (UNCLOS, Annex, Section 8, Implementing Agreement).

2. Objectives and Obligations for a Payment Regime for DSM

The starting point for designing any fiscal regime should be the principles, policy objectives, and, in this case, legal obligations it is expected to fulfill. For DSM, there are three main requirements mandated by the UNCLOS and the 1994 Implementing Agreement (UN, 1994).

a) Article 140 of UNCLOS states: "The Area and its resources are the Common Heritage of Mankind," (CHM) and that DSM "shall be carried out for the benefit of mankind as a whole."[4] In other words, any DSM payment regime must fairly compensate humankind for the loss of resources which are the CHM. To realize this goal, the ISA must balance two objectives: "(a) to ensure optimum revenues for the Authority from the proceeds of commercial production; (b) to attract investments and technology to the exploration and exploitation of the Area […]." This means any payment regime should generate as much revenue as possible for the ISA, subject to the need to attract investment.

b) Section 8(1)(b) of the Annex to the Implementation Agreement states: The rates of payments under the system shall be within the range of those prevailing in respect of land-based mining of the same or similar minerals in order to avoid giving deep-seabed miners an artificial competitive advantage or imposing on them a competitive disadvantage. This is understood to mean that any DSM payment regime must not give a competitive economic advantage to DSM through a lower burden of taxation compared to land-based mining.

c) Article 151(10) of UNCLOS states that the Assembly shall establish a system of compensation or take other measures of economic adjustment assistance including cooperation with specialized agencies and other international organizations to assist developing countries which suffer serious adverse effects on their export earnings or economies resulting from a reduction in the price of an affected mineral or in the volume of exports of that mineral, to the extent that such reduction is caused by activities in the Area. Consequently, in addition to not disadvantaging land-based mining, any DSM payment regime must also generate

[4] Article 1 of UNCLOS defines the "Area" as meaning the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.

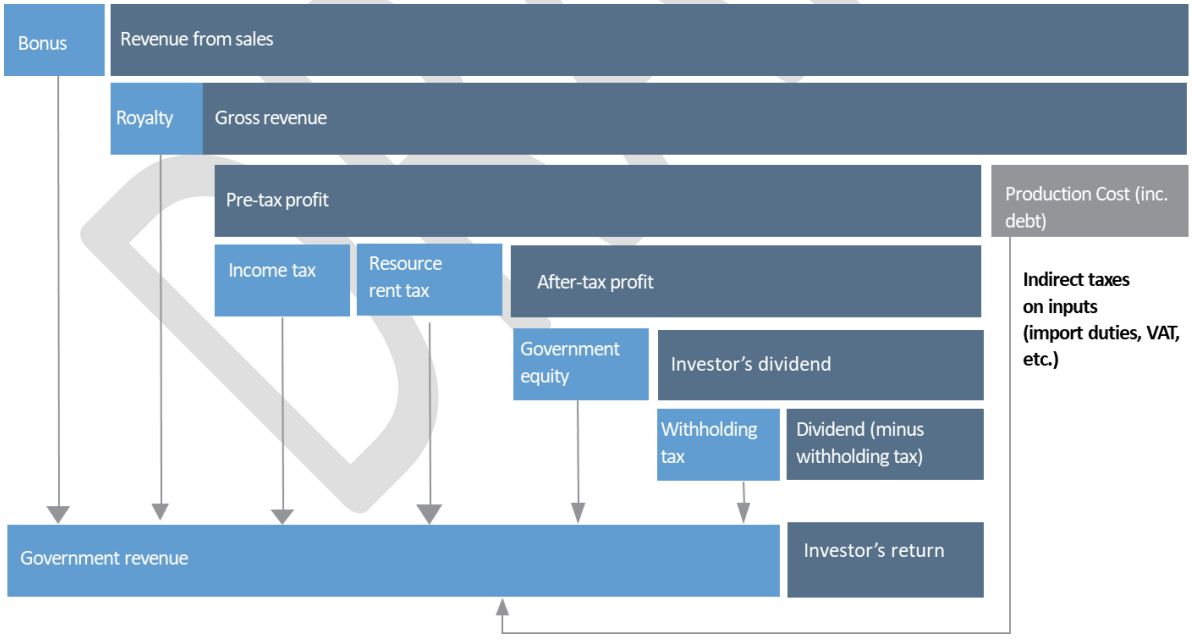
sufficient revenues to compensate developing countries for any economic harm to their land-based mining sectors that can be attributed to DSM. This issue is not discussed in this report.

To summarize, any payment regime for DSM must maximize revenues to benefit humankind, subject to the need to attract investment without disadvantaging land-based mining and, if necessary, to compensate developing countries for the loss of revenues and other adverse economic impacts from land-based mining resulting from DSM.

3. Defining the ISA's Take from DSM

"Government take" is the total financial benefits from a land-based mining project that accrue to the host government (the country where the resource is located) over the life of a project. The level at which the host government sets the government take (e.g., 50% or 60% of net project cashflows, as an example) will depend on its policy objectives. It is likely to include corporate income tax (CIT) and royalties normally associated with land-based mining, as well as other taxes and fees, such as customs duties, export taxes, and so on (see Figure 1). This total financial contribution to a country's economy is the government take. It may also be called the average effective tax rate (AETR). The target AETR, or range of AETRs, is typically the starting point from which governments design fiscal regimes for land-based mining.

Figure 1. Typical land-based extractive industry fiscal regime



Source: Natural Resource Governance Institute

Several considerations should go into determining the AETR—namely, a government's policy objectives and administrative capacity. One criterion is unique to DSM: that of ensuring comparability with land-based mining with respect to the AETR. The report explores the implications of this obligation in the next subsection.

Comparability to Land-Based Mining

Section 8(1)(b) of the Annex to the Implementation Agreement states:

> The rates of payments under the system shall be within the range of those prevailing in respect of land-based mining of the same or similar minerals in order to avoid giving deep-seabed miners an artificial competitive advantage or imposing on them a competitive disadvantage.

The agreement does not define the term "rates of payments." Others have interpreted this as meaning the AETR, meaning that the AETR for DSM should be at least within range of the AETR of land-based mining (Wilde, 2022).

The AETR for land-based mining is typically between 40% and 50%. Several studies have narrowed this to between 46% and 49% (Wilde, 2022, p. 546). On the African continent, the AETRs for land-based mining in 21 jurisdictions in 2018 were between 27% and 52.2%. Between 2016 and 2018, the average of the AETRs increased from 42.7% to 43.8% and the median from 41.5% to 46.2% (Bouterige et al., 2020). These ranges should not be treated as a ceiling for DSM; the AETR could be higher.

There may be good reasons to set a higher target AETR for DSM. Whereas land-based mining countries must compensate their citizens for the loss of their non-renewable resources, DSM must generate enough revenue to compensate the whole of humankind, as well as compensating for negative fiscal and economic impacts on land-based mining countries, including those with higher levels of taxation. For example, the AETRs for mining in Chad and Tanzania are 52.2% and 51.7%, respectively. If the rates were anything lower than this, these countries might be negatively impacted by DSM.

Finally, land-based mining countries collect other taxes not typically factored into the AETR for mining but that make up a significant share of the economic benefits (see Figure 1). Payroll taxes and indirect taxes derived from economic activities around the mine make up a large share of payments to governments. There is also the potential for significant economic benefits from indirect upstream and downstream activities. Any target AETR for DSM should be set with this incomparability in mind.

Box 1. How to assess a fiscal regime under uncertainty: Sensitivity Analysis

All payment regime options can be designed to achieve the same AETR over the life cycle of a DSM project with a given set of economic assumptions. But profitability levels are not constant across all projects and time periods. In reality, profitability levels change: over time, by company, by geographical area, and so on. The limited development of the industry today means that all the assumptions behind the MIT and IGF models are highly uncertain. Profits could be much lower, or much higher, than currently forecast. Consequently, the chosen payment regime must be flexible enough to accommodate DSM projects with different profitability now and in the future.

Sensitivity analysis is a way to test how the regimes are likely to perform depending on profitability, – measured by changes in price and cost. The report provides this analysis for all four payment options in Section 5. The key message here is that it is not sufficient to base the choice of payment regime according to a fixed AETR, which as it is liable to change under different price and/ cost scenarios.

4. Payment Regime Options for DSM

The ISA could use numerous combinations of fiscal instruments to achieve its target AETR. In practice, some of these will perform better or worse according to different profitability scenarios.

Annex 8 of the 1994 Implementing Agreement suggests that the ISA consider adopting a royalty system or a combined royalty and profit-sharing system. The OEWG is assessing four payment regimes.[5] There was no mention of specific royalty rates until 2020, when the ISA contracted the Massachusetts Institute of Technology (MIT) Material Systems Lab to produce a report to evaluate the payment regime options. We briefly describe the payment regime and rates in Box 1. It is important to note that the rates proposed by MIT assume that contractors will pay corporate income tax in the sponsoring state at a rate of 25%. The existence of sponsorship agreements that exempt CIT altogether suggests that this assumption is highly questionable. We examine this issue in detail in Section 5.

We briefly describe the four payment regimes, and proposed rates, in Box 2.

[5] There seems to be a preference for Option 4, according to the draft regulations; see ISA (2019).

Box 2. Proposed payment regime options for DSM

Option 1: A 5% fixed-rate *ad valorem*-only royalty. An *ad valorem* royalty is a percentage of the value of the resource extracted. This percentage is usually applied to the gross value of production without accounting for production costs and is the most common form of royalty (see Figure 1) (NRGI, 2015). *Ad valorem* royalties levied at a fixed rate mean the government collects a fixed percentage of the value of production.

Option 2: A two-staged (in time) *ad valorem*-only royalty. As opposed to Option 1, where the royalty rate (percentage) stays the same throughout, Option 2 proposes to vary the rate, increasing it after a certain period: 2% for stage 1 and 6% for stage 2. Presumably, the logic behind this option is that by the second period, the contractor will have recovered most or all of its upfront costs, leaving it with more revenue available to tax.

Option 3: A combined 2% *ad valorem* royalty and 18.5% profit-share. This is the only option that would give the ISA a share of the profits (typically revenue minus costs) as well as revenues. It is also the common approach to fiscal regime design for land-based mining, commonly referred to as the "tax/royalty" system.

Option 4: A progressive, two-staged *ad valorem* royalty only. The rate is 2% for stage 1 and a price-based variable rate of 5 to 9% for stage 2 based on the mineral prices of each component of nodules. *Ad valorem* royalties levied at a progressive rate—or more accurately, a variable rate—provide a government with a higher fiscal take as a factor increases and a lower take as a factor decreases. The rate is typically linked to mineral prices or production volumes. Note that the Chair's revised text updates the rates to 3 to 12.5% based on new work done by MIT in its updated model (OEWG, 2023).

5. Evaluating the Four Payment Regime Options

In this section, we compare the four regime options described in Box 2, drawing on the well-established principles of mining fiscal regime design and the IGF financial model for DSM.

The principles of mining fiscal regime design

- **Revenue maximization:** The overarching goal is to maximize revenues for the government (the ISA in this case). There are three reasons for this: 1) the resource is the CHM, 2) it is finite and non-renewable, and 3) revenues are the primary benefit of mining. This is even more pronounced for DSM than for land-based mining, considering that the main economic activity takes place hundreds of miles from any country or community that could potentially take advantage of other shared benefits such as jobs, economic linkages etc.

- **The need to attract investment:** The overall level of taxation should be set as high as possible, subject to the contractor being able to recover the cost of their investment, including a return to capital. The investor's internal rate of return (IRR) is a common way to measure this objective.

- **Progressivity:** This means the government's share of the overall proceeds adjusts automatically according to the profitability of mining projects, increasing with high profits and diminishing with low profits.[6] For example, when profits increase from $50 to $100, the average effective tax rate also steps up, e.g., from 45% to 50%. This is especially important for metals such as copper, cobalt, and manganese, which are experiencing significant price volatility due to rising demand for critical minerals (see Figure 2). Progressive fiscal regimes are, in theory, better for both investors and governments. For investors, it reduces taxes on marginal profits and therefore distorts investment decisions less. For governments, or the ISA in this case, it gives a larger share of benefits from highly profitable projects.

- **Timing of revenues:** Fiscal regimes that prioritize production-based taxes (i.e., royalties) will deliver revenue as soon as production starts, as opposed to those that rely more heavily on profit-based taxes, with more revenue coming later in the project life cycle. The timing of revenues is arguably less sensitive for the ISA since it does not have to fund public services as is the case for governments of land-based mining countries. There is also no lag in production timelines compared to land-based mining.

- **Ease of administration:** A simple payment regime is easy to understand, communicate, and administer for both the taxpayers and the regulatory authorities. This principle is especially important considering the time it will take for the ISA to build up its human and financial capacity to effectively collect payments from DSM.

- **Robustness to profit-shifting:** The IMF estimates that corporate tax avoidance costs resource-rich developing countries in Africa between USD 470 and USD 730 million in annual tax revenues from mining (Albertin et al., 2021). This loss can be minimized by designing a payment regime that is well aligned with the ISA's administrative capability and by using fiscal instruments that are less susceptible to tax-base erosion and profit-shifting (BEPS).

[6] Not all mining taxes must be progressive. Regressive taxes, such as royalties, exist to deliver early, predictable revenues. Profit taxes, on the other hand, should be progressive to maximize government revenues. See Wen (2018).

Figure 2. The principle of progressivity

The IGF Financial Model

The quantitative analysis of the four options is based on key results from the IGF financial model for DSM. The underlying assumptions of the IGF model are taken from the MIT model, including the capital expenditure, operating expenditure, life cycle of the project, production level, and rates. There are some differences in the assumptions behind the IGF model, which are described in Appendix 1. Most differences are minor, but three are important.

First, the IGF model uses different assumptions regarding the IRR required by the processor, which affects how much profit from DSM is attributable to the Area, rather than to the processor jurisdiction. This specific assumption in the MIT model is based on preliminary estimates from the first company looking into commercial nodule extraction. This company, as a first mover—meaning the first companies to extract nodules from an Area—is indeed likely to face unfavorable terms as it seeks to sell nodules to a processor without prior experience in this commodity. In the long run, however, it is reasonable to expect that nodule processors will have similar economics to those of independent land-based mining refineries today. These refineries typically do not share in the profits (or losses) of mining companies, but instead charge processing (treatment and refining) fees. This is one more factor of uncertainty, emphasizing the need for the ISA to design a fiscal regime that can accommodate the economics of first movers without building massive giveaways in its mining code to companies entering a mature and possibly very profitable market in the future. As described in Appendix 1, the IGF model adopts a middle ground between the assumption in the MIT model and the assumption of a standard, fixed return to the processor.

Second, the IGF model shows the results in terms of AETR as a spectrum, using sensitivity analysis. Sensitivity analysis is a way to test how the regimes are likely to perform depending on profitability as measured by changes in price and cost. Without this analysis, any conclusions will be extremely limited: two (or four) fiscal regime options can generate the same AETR under a certain set of assumptions. But when these assumptions change, so will the AETR of the two options, especially when these different options have different levels of progressivity. Given the level of uncertainty regarding the future of DSM, it is important to consider fiscal regimes that are robust to very different assumptions about the future profitability of DSM projects.

Third, the IGF model calculates Option 3 as a cash flow tax rather than an income tax. While both are taxes on profit, the main differences between a cash flow tax and an income tax are the treatments of investment costs and interest expenses. A cash flow tax provides for the immediate expensing of capital expenditure rather than applying depreciation allowances. A cash flow tax typically does not allow deductions for interest payments, but accounts for the cost of capital through a fixed uplift on negative cash flows. A cash flow tax is a lot more efficient than an income tax at capturing a share of the economic rent from an extractive project (see Baunsgaard &Devlin, 2021. Because the ISA does not operate an income tax like a government does, it would be better served from adopting a simpler, more effective cash flow tax than an income tax system if it were to adopt Option 3.

An Assessment of the Four Payment Regime Options

The table below shows the key results for the four payment regimes under base case assumptions:

- Revenue and royalty base: the gross value of the contained metals—copper, nickel, cobalt, and manganese (valued with reference to manganese ore)
- CIT rate in sponsoring state = 25%
- Processor IRR = 50% * 10% + 50% * contractor IRR
- 0% WHT on interests, dividends, and 50% of operating services
- 60% debt financing from build and design phase

The first thing to note about the results in Table 1 is that every payment regime option except Option 3 produces a lower AETR than the target AETR of 47%. The four options were designed by MIT to achieve a similar AETR under prevailing assumptions at the time. With updated price and cost assumptions, the expected profitability of DSM is higher and the AETRs already look different. This is an endorsement of our focus on sensitivity analysis when looking at AETRs. The ISA will need to update the rates of payment (other than Option 3) to achieve a theoretical AETR of 47% under current price and cost assumptions.

The exception of Option 3 merits attention. Under revised assumptions, it achieves a higher AETR for the ISA while also achieving a reasonable return for investors. This is because unlike the other options, it includes a profit share. Whereas a royalty is relatively easy to administer and provides early, predictable revenue, a profit share captures an important share of profitable businesses while sparing loss-making entities, thereby encouraging investment and economic activity.

Table 1. Key results of X model under base case

Participant cashflows %	Option 1	Option 2	Option 3	Option 4
ISA %	14.9%	16.1%	24.1%	14.6%
Sponsoring state %	21.3%	21.0%	23.3%	21.4%
AETR (ISA and sponsoring state combined)	*36.2%*	*37.1%*	*47.4%*	*36.0%*
Contractor shareholder %	62.3%	61.4%	51.1%	62.5%
Loan provider %	1.4%	1.4%	1.4%	1.4%
Contractor shareholder IRR (real term CF)	**22.2%**	**22.6%**	**21.1%**	**22.7%**

Indeed, Option 3 is the most progressive payment regime. Figures 3 and 4 show how the four payment regimes compare across different price and cost scenarios. Option 4 is slightly less

regressive than Options 1 and 2 with respect to changes in prices. This is to be expected because Option 4 varies the royalty rate with the price of the nodule, meaning that the ISA's share increases automatically when prices rise and drops when they do. However, it is equally regressive as Options 1 and 2 with respect to changes in cost.

Figure 3. Sensitivity analysis of AETR for price variation

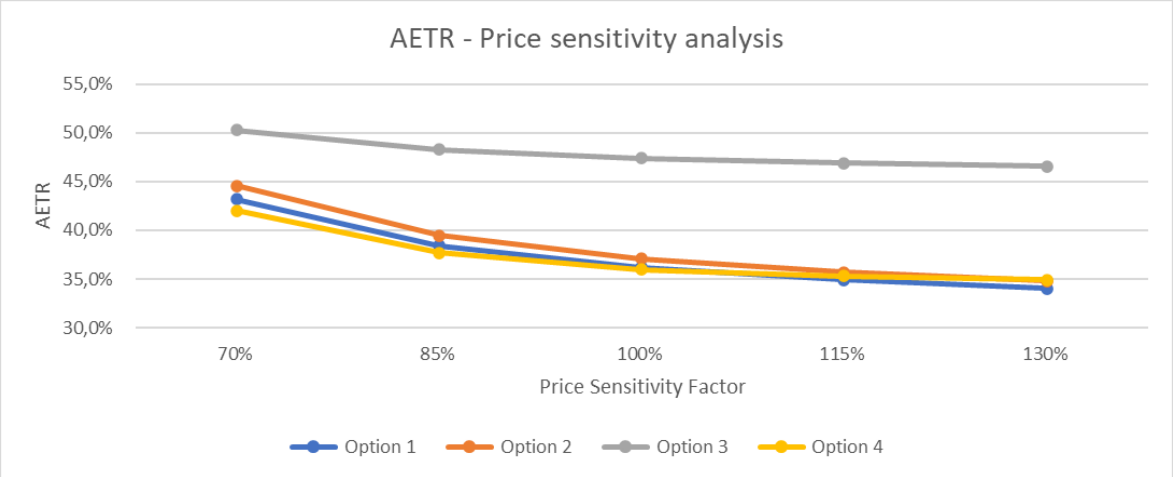
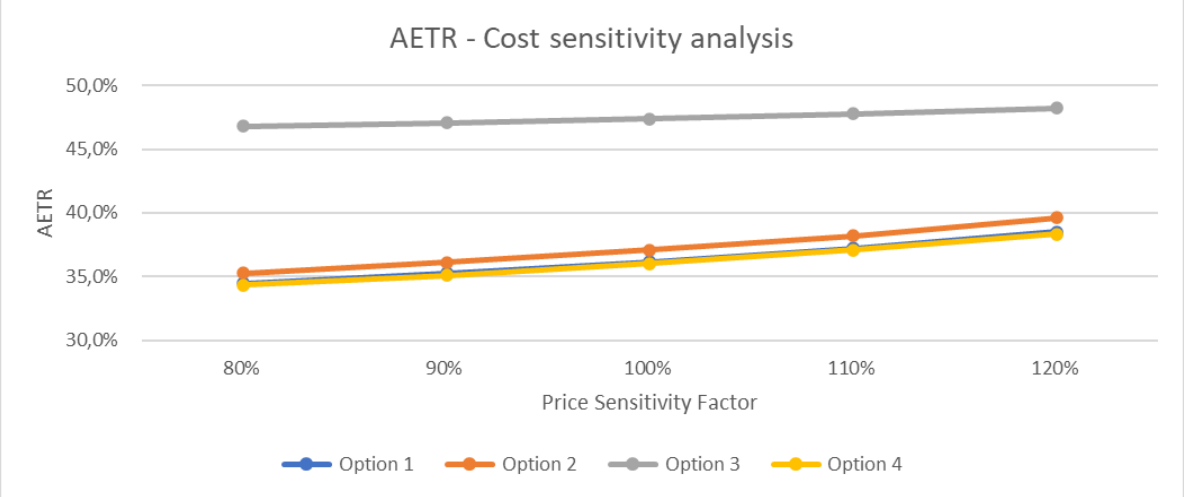


Figure 4. Sensitivity analysis of AETR for cost variation



The downside of a progressive fiscal regime is its administration. Options 1, 2, and 4 would all be easier to administer than Option 3 because they depend on a royalty, which is a function of price multiplied by volume. A profit share, under Option 3, would require the ISA to verify contractors' taxable income. Costs may be particularly challenging to monitor considering the lack of historical cost data for DSM, although basing the profit share on cashflows means there is no need to verify depreciation or interest charges (discussed in detail in Section7). Of the three royalty-based payment regimes, Option 1 would the easiest to apply since it is a fixed rate. Option 2 would be slightly more challenging since it requires the ISA to vary the rate depending on the time period, but this should be relatively easy to observe. Option 4 would be the most complicated, requiring the ISA to monitor the price to determine when a change in royalty rate is triggered, as well as updating price bands and royalty rates every five to ten years to reflect changing market conditions.

A profit share would also be the most vulnerable to profit shifting. Although the nodule price is indexed to publicly quoted prices, contractors can still overstate costs to reduce their tax liability to the ISA. In addition, some commentators have raised specific concerns about the ISA's capacity to effectively administer profit taxes. They also point out the ISA's lack of a tax treaty network, which can be an important avenue for double tax relief and cross-border dispute settlement, although not the only one. Finally, there is the complication of state-owned enterprises (SOEs), which may be able to operate at a loss and, as such, pay no tax. These are valid concerns but not insurmountable. We explore various measures to safeguard a profit share in Section 6.

Options 4 and 2 would also not be without risks with respect to profit shifting. Option 2 varies the rate according to time. Such "cliff-edge" fiscal changes are vulnerable to abuse by investors, particularly by means of high-grading. High-grading involves companies increasing the rate of extraction or preferentially extracting high-grade ore compared to what they would otherwise do absent fiscal considerations. The result is that the amount of royalty or tax relief is well above that originally envisioned by the resource owner. It could also result in contractors leaving deposits behind, resulting in a lost opportunities for the CHM. High-grading is most likely to occur when the relief is time-limited (e.g., the royalty is 2% for the first five years, stepping up to 6% thereafter) and unconstrained (i.e., not linked to the level of production or other indicators). In practice, it is very difficult to definitively establish high-grading. It is also unclear how feasible it is for deep-sea miners to selectively pick nodules based on their grade. If the ISA chooses Option 2, it will need to ensure a thorough technical review of mining plans at the time development plans are approved and carry out monitoring of actual production against these. In addition to high-grading, there could also be a greater incentive to rush production. This could be at the expense of taking a precautionary approach and monitoring environmental impacts.

One risk of Option 4 is that it may provide an economic incentive for mining companies to deliberately understate the value and price of minerals to avoid moving into the higher royalty rate band. This risk is especially acute in the context of related-party transactions. The OEWG has sought to mitigate this risk by basing sales revenue on the nodule transfer price which is the percentage of contained metal multiplied by the relevant publicly quoted price. Publicly quoted prices can be physically observed, making this a good practice to prevent contractors from deliberately understating the price to reduce their sales revenue and pay less royalty. Basing royalties on publicly quoted prices is consistent with the practice in most land-based mining countries.

Table 2. Summary of advantages and disadvantages of the four payment regime options

Options	Advantages	Disadvantages
Option 1: Fixed rate	• Of the proposed royalty options, this one would be the easier to administer (e.g., no need to monitor price to determine rate). • Lower compliance costs. • Revenue stability.	• Government take would not adjust to reflect changes in profitability.

Option 2: Variable rate (time period)	• Potentially less regressive than a fixed-rate royalty (depends on time-profit correlation). • Easier to administer than a price-based royalty.	• Cliff edges would make it vulnerable to abuse, e.g., high-grading. • Potentially less progressive than a price-based royalty.
Option 3: Variable rate (price-based) and profit share	• Combines an early, predictable source of revenue with a share of the profits. • Most progressive option. Profit share would only be due when a contractor is making profits.	• Profit share may be complex to administer. • Revenues may be delayed. • Vulnerable to profit-shifting, particularly with respect to costs.
Option 4: Variable-rate royalty (price-based)	• ISA's revenue would increase automatically when prices rise. • Easy to communicate to the public; citizens like to see royalties increase with prices. • Sensitive to a company's profitability, assuming profits track prices.	• Companies may understate the value and price of minerals to avoid moving into the higher royalty band. Can be addressed by using benchmark prices, as proposed by the OEWG. • More complex to administer; prices must be monitored to determine the rate.

6. Examining the Interaction Between the Four Payment Regimes and Sponsoring State Taxes

The African Group has consistently argued (including in its statement to the Informal Working Group on Payment Systems in June 2022) that the payment regime option outlined by MIT does not represent adequate compensation for the CHM; that it will result in a lower average effective tax rate (AETR) than land-based mining; that it will not generate sufficient revenues to compensate land-based miners; and that it is regressive, meaning the ISA will collect proportionally less taxes with higher profits and more taxes with lower profits. Taxes paid to sponsoring states (or not, as is the African Group's concern) is the main determinant of whether the AETR for DSM will be in the range of land-based mining countries.

Sponsoring states are key stakeholders in the DSM management process. According to Article 153(2)(b) of UNCLOS, non-state actors can only file an application for a mining licence if they are sponsored by a state. This sponsoring state is responsible for ensuring that the contractor complies with the terms of its contract and its obligations under UNCLOS (Article 139). In return, sponsoring states are entitled to collect CIT from contractors. It is expected that they will use at least some of this revenue to help finance their monitoring activities.

However, the African Group and other commentators have raised concerns about whether it is reasonable to assume that contractors will pay 25% CIT to their sponsoring states, or in practice, a much lower rate or no tax at all. Their concerns are summarized below.[7] To further this argument, it could be added that CIT is not the only tax on profit that sponsoring states may reduce or exempt. They may also offer lower or zero withholding tax on outbound payments, whether in domestic law, in sponsorship agreements, or through their double tax treaties. If the African Group's intention is to put all contractors on a level playing field, it could consider the effect of other profit-based tax incentives in reducing the ISA's target AETR.

1. **Sponsoring states charge contractors low or no CIT.** There are sponsorship agreements that exempt CIT altogether. This highlights the risk of "forum shopping": contractors choosing a low-tax sponsoring state to reduce their global tax bill. Whereas land-based miners are confined to the country where the resource is and the tax regime that applies there, deep-sea miners are much more mobile and can base themselves wherever taxes are lowest (Wilde, 2022, p. 542). This could lead to a "race to the bottom" effect in terms of sponsoring states setting low or no CIT for DSM-sponsored activity.

2. **Sponsoring states and contractors fail to disclose the sponsorship agreements, making it impossible to know whether CIT is being charged or at what level.** This lack of contract transparency makes it impossible to determine the overall tax burden that contractors face. The ISA may find it hard to guarantee the sustainability of a payment regime that is premised on a target AETR that cannot be verified in many cases.

Initially, the African Group proposed to increase the rates to account for some contractors not paying sponsoring state taxes, thereby reducing the AETR below land-based mining levels (see Table 1).

Table 3. Proposal from the African Group

	Royalty	Profit share
Option 1	14.4%	n/a
Option 2	First period: 6.4% Second period: 19.3%	n/a
Option 3	5%	CIT: 30% Excess profit share: 30% (hurdle rate is 12%)
Option 4	12% to 25% depending on price	n/a

The African Group is correct that what level of CIT contractors pay to their sponsoring states has a material impact on the AETR. The following chart assumes three taxation scenarios in a sponsoring state under Options 3 and 4:

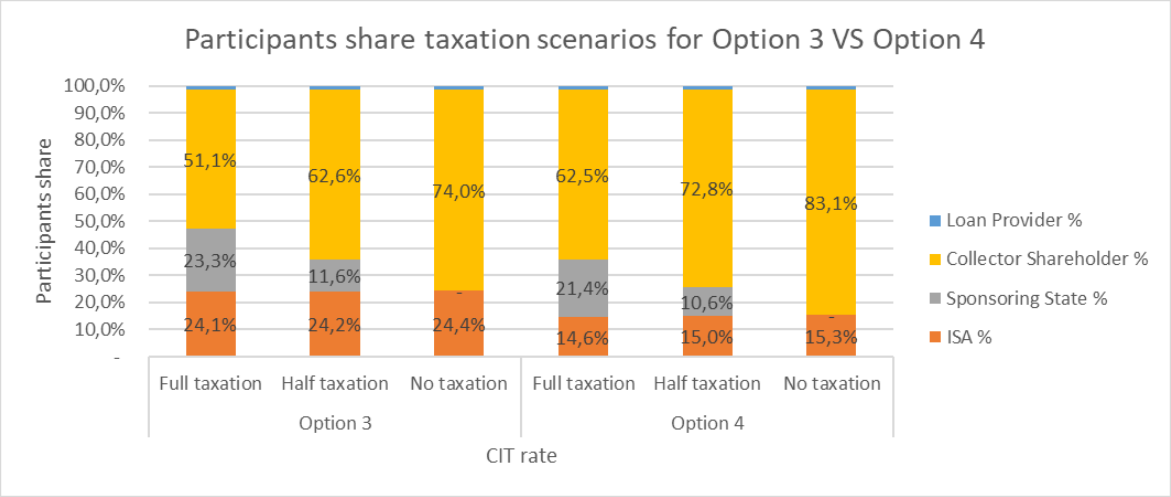
- Full taxation: 25% CIT and 10% WHT on services, interests, and dividends

[7] Some commentors have argued that there is a higher-order consideration regarding sponsoring state taxes, and that is whether CIT overcompensates states for their compliance role (Wilde, 2022, p. 543, supra n. 10). We share this concern; however, we do not explore it further in this report.

- Half taxation: 12.5% CIT and 5% WHT on services, interests, and dividends
- No taxation: 0% CIT and 0% WHT on services, interests, and dividends

This shows that when the rate of sponsoring state taxes decreases, the contractor shareholder's share of total revenue increases significantly, especially for Option 4. The sponsoring state's share decreases all the way to 0%, which is why this form of aggressive tax competition is often called a "race to the bottom."

Figure 5. Participants' share of Option 3 versus Option 4



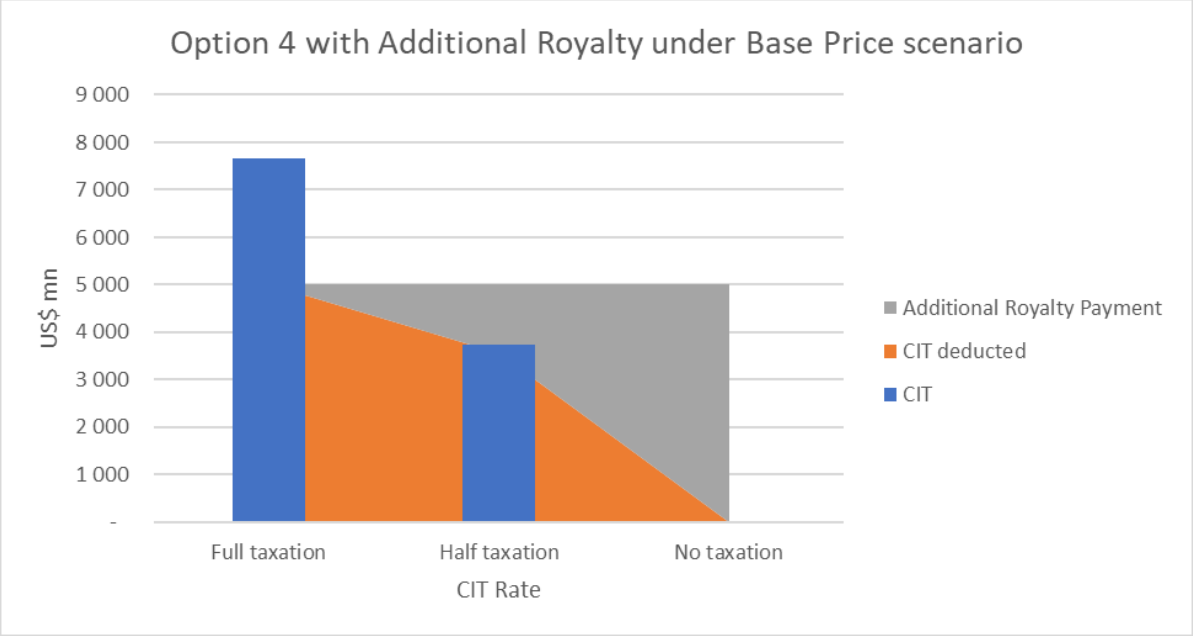
However, the initial proposal to increase rates might unfairly burden those contractors that do pay sponsoring state taxes. Consequently, the African Group then made another proposal in 2022, with the objective that all contractors would pay a similar AETR on their operations in the Area regardless of their sponsoring state.

Option 4 with an Additional Royalty

To mitigate the impact of sponsoring state CIT, based on Option 4, the African Group proposed to add an additional royalty at 6% (effectively an "Option 4b»), from which contractors can deduct the CIT paid to the sponsoring state in the previous year. The additional royalty would kick in in year five of commercial production. The policy intention is to try to ensure that all contractors have a similar AETR regardless of how much (or how little) CIT they pay to their sponsoring state.

The figure below represents graphically how this proposal would work under our base case assumptions. If a contractor pays a CIT rate of between 20 and 25% in the sponsoring state, it should be able to credit all its CIT payments toward this additional royalty and will not pay any additional royalty. However, as the contractor pays less CIT in the sponsoring state, it will have less CIT to credit against the ISA's additional royalty, and it will pay more additional royalty. This aims to remove any financial incentive to secure a low CIT rate or CIT holidays in sponsoring states.

Figure 6. CIT and additional royalty payment under Option 4b



An equalization measure is a necessary addition to the payment regime options. The benefit of using an additional fixed-rate royalty is that it should be relatively easy for the ISA to administer. The amount due would be a function of nodule prices multiplied by volume sold—the same information required to administer any mineral royalty.

However, there are also challenges in relying on an additional fixed-rate royalty:

- Even with a five-year moratorium, CIT is likely to be paid later than an additional royalty. Some contractors may start making profits later than five years after first commercial production. Local tax rules in the sponsoring state, such as accelerated depreciation, may further defer payment of CIT. Crediting later CIT payments against earlier additional royalty payments would be challenging unless the ISA offers the option to carry back CIT payments in addition to carrying them forwards. This option would be financially difficult to implement.

- An additional fixed-rate royalty will be quite regressive. As a result, its effectiveness as an equalization measure decreases as we get further from the model's base case assumptions. In the diagram below, we replicate the previous diagrams with our minimum price and maximum price scenarios (see Appendix 1 for details).
    - Under the minimum price scenario, profits would be lower, which would result in lower CIT payments, leaving contractors with less CIT to credit against the additional royalty. As a result, the contractors would end up paying an additional royalty to the ISA over and beyond their CIT payments to the sponsoring state, even if they are paying a full 25% CIT rate. If this happens in unfavourable market conditions, it could put a strain on investors' cash flows. This risks undermining the entire investment proposition in DSM, and may generate calls for renegotiation by the time the additional royalty is supposed to apply.

- Under the maximum price scenarios, profits would be higher, which would result in higher CIT payments, leaving the contractor with enough CIT to credit against the additional royalty, even if its CIT rate is much lower than 25%. As a result, the additional royalty is not fulfilling its role as an equalization measure.
- The current proposal only allows deductions for CIT. This makes Option 4b simpler to administer. However, there may be good arguments to also allow deductions for other taxes and charges paid to the sponsoring state, such as custom duties, production fees, or withholding taxes. If these deductions were allowed, the additional royalty rate would need to increase, making this proposal even more regressive.

Figure 7. Price sensitivity analysis for Option 4b—minimum price scenario

Figure 8. Price sensitivity analysis for Option 4b—maximum price scenario

In conclusion, the African Group made a very strong point in proposing an equalization measure to low taxation of DSM in sponsoring states. This proposal is in line with how the world has come to think of solutions to aggressive tax competition, perfectly illustrated in the Global Minimum Tax, which will be progressively adopted from 2024 onwards. However, from a design perspective, a royalty may not be the best instrument to achieve this objective. It is likely to overcharge contractors when profits are low and to undercharge them when profits are high. As well, although the additional royalty itself would be relatively easy to administer, crediting later CIT payments against earlier additional royalty obligations could prove to be an administrative challenge.

Option 4 with an Additional Profit Share

An alternative equalization measure would be to adopt an additional profit share in place of the additional royalty. Contractors would pay the ISA an additional profit share from which they could deduct the CIT paid to the sponsoring state in the previous year along with any amount of CIT paid to the sponsoring state in previous years and not yet credited against the profit share (unlimited carry forwards).

The additional profit share would be based on the contractor's pre-tax cash flow. A cash flow tax is distinct from CIT. The main differences between a cash flow tax and CIT are the treatments of investment costs and interest expenses. A cash flow tax provides for immediate expensing of capital expenditure rather than applying depreciation allowances. A cash flow tax typically does not allow deductions for interest payments, but accounts for the cost of capital through a fixed uplift on negative cash flows (see Baunsgaard & Devlin, 2021).

The additional profit share achieves the same goal as the additional royalty—ensuring a relatively consistent AETR regardless of the CIT rate in the sponsoring state—but more effectively.

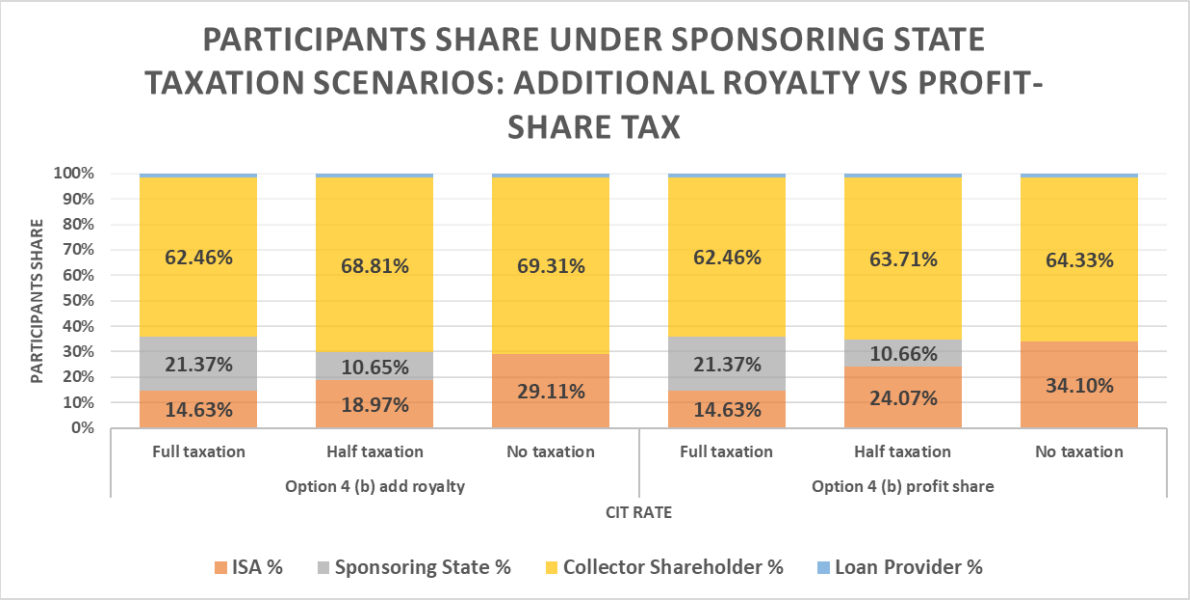
The table below shows the key results for Option 4 under the two versions of equalization measures: with an additional royalty and with an additional profit share. It shows that the two versions perform equally when the sponsoring state charges a CIT rate of 25%. Contractors do not pay either the additional royalty or additional profit share as long as they pay a 25% sponsoring state CIT rate.

Table 1. Key results of X model for Option 4 with additional royalty and additional profit share

	Option 4b with additional royalty	Option 4b with additional profit-share
ISA %	13.8%	13.79%
Sponsoring state %	32.3%	32.34%
AETR	*46.1%*	*46.1%*
Contractor shareholder %	52.5%	52.5%
Loan provider %	1.3%	1.3%
Contractor shareholder IRR (real-term CF)	21.5%	21.5%

Figure 9 illustrates how the AETR is affected under both equalization measures in scenarios where sponsoring state taxes go down. The figure shows that the profit share is better at capturing the revenue lost by sponsoring states when they reduce their taxes. With the additional royalty, the equalization is not perfect, and the AETR still decreases under the half-taxation and no-taxation scenarios.

Figure 9. Participants' share of Option 4b with additional royalty vs additional profit share



Figures 10, 11, and 12 show how the equalization measure based on a profit share responds to price variations. It shows that under all three mineral price scenarios, including the minimum price one, there is no additional payment to the ISA as long as the sponsoring state CIT rate is at 25%. It also shows that under the maximum price scenario, the additional profit share is very high, negating any

financial incentive the contractor might get from a low or nil CIT rate in the sponsoring state. This additional profit share is therefore a lot more effective as an equalization measure than the additional royalty when one considers a wide range of price and profitability scenarios.

Figure 10. Price sensitivity analysis for Option 4b with additional profit share—base case

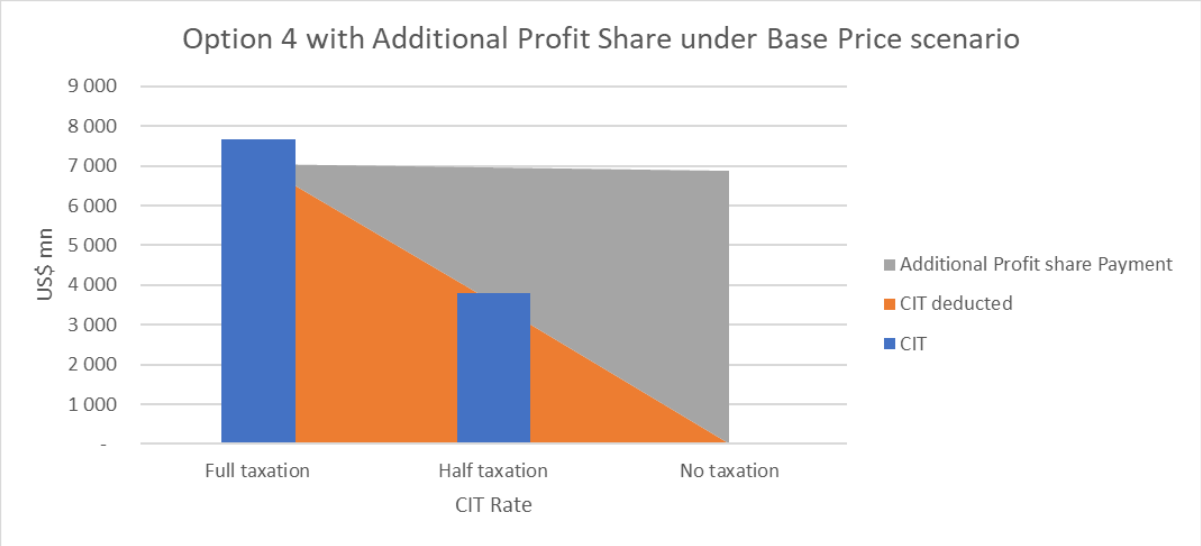


Figure 11. Price sensitivity analysis for Option 4b with additional profit share—minimum price scenario

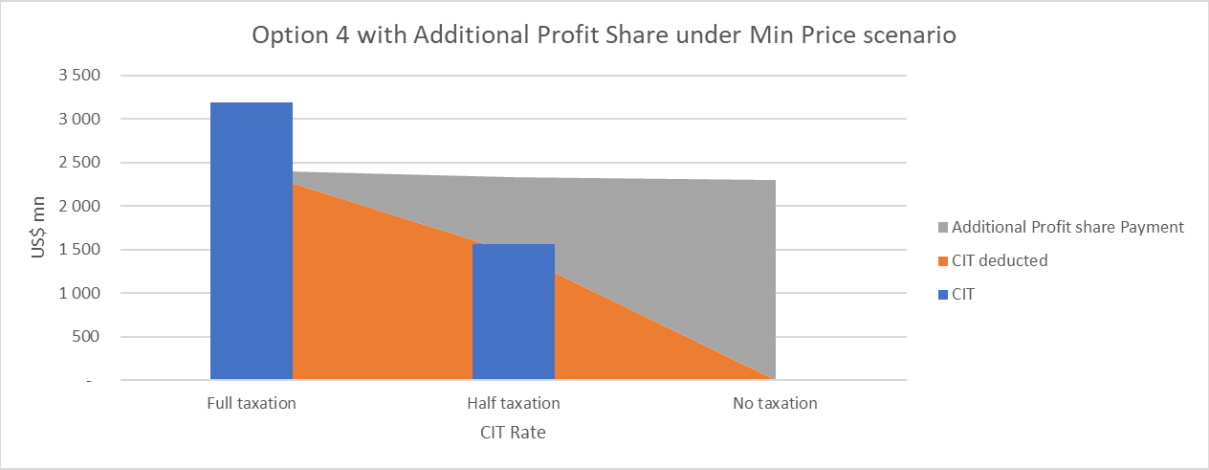
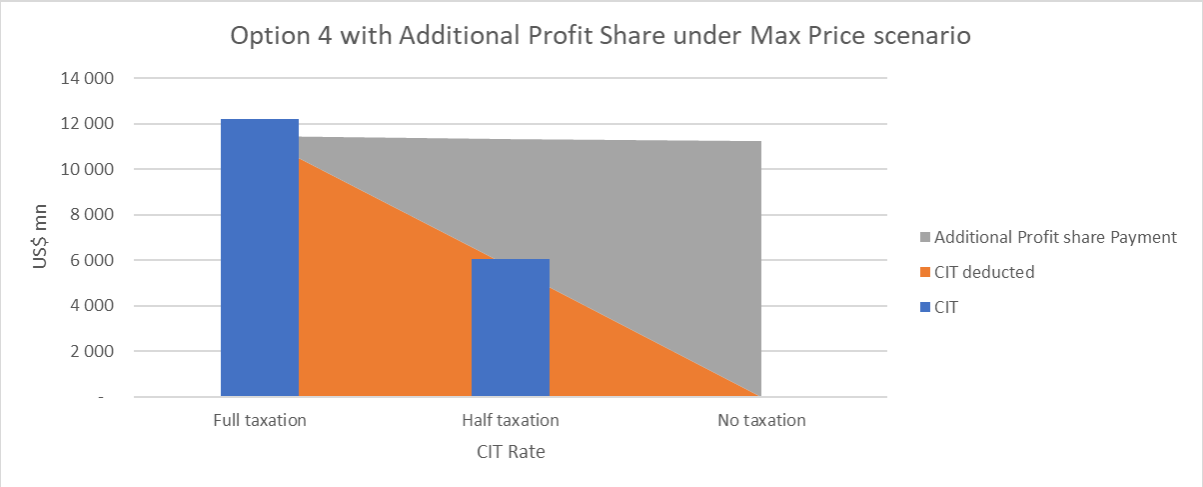


Figure 12. Price sensitivity analysis for Option 4b with additional profit share—maximum price scenario



In other words, the additional profit share is significantly less regressive than the additional royalty. When the sponsoring state does not collect CIT, this means that the ISA's share of the total proceeds increases when the contractors' profits increase, and the ISA's share decreases when the contractors' profits decrease, reducing the burden on the contractor's bottom line when profits are low.

The main advantage of an additional profit share is that it is more efficient, and therefore more likely to be sustainable, than an additional royalty. It will not charge contractors any additional payment as long as the rate of tax in sponsoring states is at 25%, regardless of market conditions. It will also take effect at the right time. CIT in the sponsoring state would normally be paid before a profit share based on cash flows, which will allow contractors to carry forward any CIT payment to credit against the additional profit share. This order comes from the respective design of an income tax base, which usually depreciates certain expenses over time, and a cash flow tax base, which deducts all costs as they are incurred and carries forward losses indefinitely. This difference leads to positive (taxable) income before a positive (cumulative) net cash flow. Especially once we include an uplift on negative cash flows—an annual increase of carried forward cash flow losses determined by an uplift rate, e.g., 5% or 10%. Another advantage is that the profit share would most likely be included in the calculation of a company's effective tax rate (ETR) in a sponsoring state for the global minimum tax (see the explanation in Box 3).

The main challenge with a profit share is that it is harder to administer, and more vulnerable to abuse, than royalties. There are two channels for profit shifting. The first is that contractors could understate the value and price of the nodules to reduce their sales revenue. Using publicly quoted prices addresses this risk, although the ISA will still need to monitor volumes and metal content. The second risk is that contractors could overstate costs. Arguably, this risk is at present higher for DSM than for land-based mining since there is no historical cost data for DSM against which the ISA can benchmark costs.

Having to monitor costs will always make a profit share more difficult to administer than a royalty, but basing a profit share on cashflows, rather than on income like a CIT, reduces this challenge. There are two main reasons for this:

- The first is that a tax on cash flows allows investors to immediately deduct all business expenses in full as soon as they are incurred. Consequently, there is no deduction for

depreciation since all investment expenditure is expensed when it is incurred and doing so would amount to a double deduction. This means there would be no need for the ISA to verify depreciation expense, which is otherwise typically a challenge under CIT.

- The second is that interests on loans are not deductible from a cash flow tax base. Instead, we apply a fixed uplift that approximates the cost of capital to negative cash flows. Arguably, the biggest risk of profit shifting in the mining sector is excessive interest deductions on related party loans Removing this risk makes a cash flow tax simpler to administer, and more robust to profit shifting, than CIT. The ISA could adopt other simplification measures such as, for example, limiting the deduction of management fees (another source of profit shifting) to a percentage of operating expenses.

The ISA would need to audit costs. It could do this directly, progressively building its capacity over time through technical assistance from organizations such as the IMF, World Bank, OECD, and IGF. Also, Tax Inspectors Without Borders is a United Nations Development Programme and OECD initiative that provides hands-on support to governments to carry out tax audits, with big results (OECD & IGF, 2022). It could be a good option for the ISA to receive direct assistance to carry out tax audits of contractors. Alternatively, ISA could outsource the audit function to an audit firm, temporarily or permanently, through a competitive tender.

There is also the issue of double tax relief with a profit share. While double tax treaties are an important vehicle for relieving double taxation, they are not the only one. Most countries provide some level of relief from double taxation unilaterally. Many cases of residence-source juridical double taxation can therefore be eliminated through domestic provisions (ordinarily in the form of either the exemption or a credit method), which operate without the need for tax treaties (PCT, 2021). The ISA could provide for double tax relief in the Mining Code, leaving any remaining disputes between states or contractors and the ISA to be settled through the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea (UNCLOS, Article 187). This issue is further discussed in the section on the taxation of transfers of DSM rights.

To conclude, if the ISA would like to introduce an equalization measure to ensure a consistent AETR regardless of sponsoring states' taxation levels, there are clear trade-offs between an additional royalty and an additional profit share. On the one hand, a royalty would be easier to collect than a

Box 3. Interaction between the global minimum tax and an additional royalty or/ profit share

If they do not pay tax in the sponsoring state, contractors may be subject to an income inclusion rule or an undertaxed profits rule in another jurisdiction under the global minimum tax rules ("GloBE"). The additional royalty to the ISA would not be a "covered tax" under global minimum tax rules, but an additional profit share should be, and would normally be attributed to the sponsoring state in the calculation of its effective tax rate. So an additional profit share would limit the risk that contractors pay a top- up tax in another jurisdiction. This interpretation would be in line with the guidance released so far from the OECD on the attribution of taxes to each jurisdiction, but it remains to be confirmed by the Inclusive Framework on BEPS. [1]

profit share, an important argument for an organization with limited resources such as the ISA. However, a royalty is a less efficient equalization measure than a profit share; even with the best possible calibration, it cannot capture all the revenue lost to low or nil taxation in sponsoring states. It is also potentially more onerous on contractors, increasing the overall AETR in scenarios with low profitability, and could undermine investment in the Area. An additional cash flow tax would therefore better fit the design requirements of an equalization measure. The OEWG should clearly understand and explain the trade-offs in making its recommendation to the ISA.

7. Taxing the Transfer of Exploration and Mining Rights

The African Group, in its statement to the Informal Working Group on Payment Systems on March 21, 2022, recommends that the ISA tax the capital gains arising from the transfer or sale of exploration and mining rights relating to DSM. When a company sells or transfers an asset, it can make a capital gain or a capital loss. The gain is the full amount received from the sale or transfer minus the purchase price. Gains from the transfer of mineral rights can be very significant, up to hundreds of millions of dollars for a single mining license, making the African Group's proposal and important one for the ISA to consider (IGF, 2021).

The taxation of the transfer of mining rights pertaining to resources in the Area seems consistent with the ISA's legal mandate. Specifically, Section 8(1)c) of Annex 1 of the Implementing Agreement gives the ISA the option to choose a royalty system or combination of a royalty and profit-sharing systems. A capital gains tax represents a share of the profits arising from the sale or transfer of a mining right. Section 8(1)(b) also requires that the rates of payment be within the range of those for land-based mining, and since a tax on the sale or transfer of mining rights is a feature of most land-based fiscal regimes (see the next section), not applying such a tax would give DSM a comparative advantage over land-based mining.
If the ISA does not tax the gains from the transfer of mining rights, or at least establish a sourcing right in the area, then the country where the seller is located could tax the gains. In that case, the contractor could try to structure the transaction so that the seller is based in a jurisdiction that does not tax capital gains, thereby avoiding paying tax anywhere.

There are two ways to tax capital gains. One is through a separate tax on capital gains, and the other is by incorporating the gain into income that is subject to a more generally applicable profit share, such as under Option 3 discussed earlier. Either way, the ISA will need to establish the right to tax direct and indirect transfers of DSM assets. Typically, when a land-based mining asset or right or interest relating to that asset is sold, the country where the resource is located will have the right to collect capital gains tax on the sale under both its domestic law and tax treaties. This is called a direct transfer. In the context of DSM, the resource is in the Area, which is controlled by the ISA, giving it the right to tax the transfer or sale of the right to explore or exploit the resource.

Where the situation becomes more complex is if the asset or licence is sold indirectly through a chain of ownership. An indirect transfer is where the shares in the mine or shares in the foreign company that owns the mine are sold. For example, the foreign company that owns the sponsored entity sells off some of its shares, resulting in a partial or full change of ownership in the DSM

operation. The sale can take place outside of the sponsoring state even without the knowledge of the ISA.

The Taxation of Offshore Indirect Transfers in Land-Based Mining Countries

Taxation of capital gains is a common feature of most countries' tax regimes. Many countries tax the capital gains of their residents and some also have specific provisions to tax the capital gains of non-residents, if the gains derive from property located in their jurisdiction. According to a survey prepared by Price Waterhouse Coopers and last updated in 2022, the majority of countries tax capital gains (PwC, n.d.). The survey considered 151 jurisdictions, 133 of which have rules in their legal systems to tax capital gains, which represents 88% of the jurisdictions covered. Appendix 2 lists the jurisdictions that have capital gains tax rules in their tax systems.

Owners of a certain asset can avoid capital gains taxes in the country where the asset is located by interposing a chain of entities and then selling shares in an intermediate entity of the chain in a low-tax jurisdiction. The sale of the entire structure is referred to as an offshore indirect transfer, since they relate to transfers carried out offshore and refer indirectly to the asset. In the absence of tax rules on offshore indirect transfers, the country where the asset is located will remain with no revenue when substantial gains are realized abroad, even though the gain inherently relates to the asset.

This issue has been receiving greater attention especially in developing, resource-rich countries. Although no comprehensive data is yet available, our research identified 27 countries that have specific capital gains taxes for the indirect transfer of assets located in their territories. Many of them are resource-rich. Box 4 lists these jurisdictions. In addition, Brazil and Italy have recently presented legislative bills to introduce the taxation of indirect transfers.

Box 4. Sample of resource-rich countries that tax offshore indirect transfers of mining assets

1. Argentina
2. Australia
3. Cameroon
4. Canada
5. Chile
6. China
7. Colombia
8. Ecuador
9. France
10. Ghana
11. Guinea
12. India
13. Kazakhstan
14. Kenya
15. Mexico
16. Mongolia
17. Mozambique
18. Namibia
19. Nepal
20. Papua New Guinea
21. Peru
22. Senegal
23. South Africa
24. Tanzania
25. Uganda
26. UK
27. Uruguay
28. Vietnam

Indirect transfers rules are designed to levy tax over gains arising upon the alienation of shares or comparable interest in an entity—which can be incorporated onshore or offshore—whenever these gains substantially derive from immovable property located in the country. The definition of immovable property can include land, buildings, and factories, as well as mines and related licenses and rights.

International tax norms also support the taxation of capital gains at source in cases of offshore indirect transfers. Bilateral tax treaty models from the UN and the OECD both do so, in their article 13(4), provided in the following box. The Area is not a sovereign country, and the ISA will not sign bilateral tax treaties, but it can be argued that the same principle of source taxation should apply to natural resources in the Area.

In the context of DSM, all alienations of mining assets, licenses, and rights are necessarily taking place abroad, since the entities holding the licenses and their shareholders will be registered in other jurisdictions. As a result, all sales of mining assets and related licenses will be offshore sales. While the parties can still negotiate the sale of the license itself, it can be expected that most transactions will involve the sale of the license-holder's shares, or even of intermediate activities, thus resulting in a change of the corporate chain ownership.

For that reason, if the ISA decides to impose a form of capital gains tax on the sale of mining assets and related licenses and rights, it is important to consider the introduction of tax on offshore indirect transfers.

Article 13(4) of the UN Model Tax Convention

Gains derived by a resident of a Contracting State from the alienation of shares or comparable interests, such as interests in a partnership or trust, may be taxed in the other Contracting State if, at any time during the 365 days preceding the alienation, these shares or comparable interests derived more than 50 percent of their value directly or indirectly from immovable property, as defined in Article 6, situated in that other State.

A Description of the African Group's Proposal

The African Group proposal consists of a capital gains tax on both direct and indirect transfers, the "direct transfer of rights" tax and the "indirect transfer of rights" tax.

"Direct Transfer of Rights" Tax

Regulation 23 of the Draft Regulations on Exploitation of Mineral Resources in the Area, Collation of Specific Drafting Suggestions by Members of the Council, December 2019 (DRSDS), describes the obligations attributable to the contractor and to the transferee upon the transfer of rights and obligations under an exploitation contract. The Regulation provides that the Commission will check compliance with certain obligations prior to recommending approval of the transfer.

The African Group proposal is to include the payment of a "direct transfer of rights" tax among the obligations to be verified. The "transfer of rights" tax must be paid by the transferor to the authority.

"Indirect Transfer of Rights" Tax

The "indirect transfer of rights" tax targets the gain made by the foreign entity selling its interest in another entity, which in turn holds rights and assets located in the Area. The ISA has jurisdiction to tax those gains made abroad because they ultimately refer to a right or asset located in the Area. It is common that resource-rich countries tax foreign share deals when such an economic nexus to a local asset is demonstrated (see the list in Box 4).

To tax foreign entities, it is necessary to establish a sourcing rule and enforcement mechanisms. The African Group proposal is designed as a withholding tax on the purchase price minus the paid-in capital due by the transferee. The transferee is the collecting agent that is expected to calculate the gain, deduct the amount from the purchase price, and pay the tax due directly to the ISA. The tax rate is 25%. The amount withheld by the transferee is an anticipation of the gain that is effectively realized by the transferor. Further, the transferor can either claim a refund or be requested to pay the outstanding difference, based on the difference between the amount withheld and the actual gain calculated according to the market value.

In summary, there are two moments. First, the transferee will withhold an amount X, calculated by applying the 25% rate on the positive difference between the price and the paid-in capital of the transferor. This approach consists of a withholding tax meant to approximate the net gain with

elements more likely to be available to the transferee. Second, the transferor will calculate its effective gain based on the true market value of the gain, also applying the 25% rate, resulting in an amount Y. The amount X can be deducted from the amount Y, and if any positive or negative difference is verified, the transferor will claim a refund or pay the complementary amount.

Comments on the African Group's Proposal

Withholding Tax Mechanism

Withholding tax is commonly adopted by jurisdictions as a compliance mechanism. Since the transferee is in possession of the funds to pay the purchase price, it is easier to ensure tax collection than in the case of the transferor. Moreover, the transferee has an immediate interest in having the license compliant with the relevant obligations to avoid having any disruptions to operations once it takes ownership.

There are two different approaches to the withholding tax mechanism. The most common approach, and the one proposed by the African Group, is to consider the amount withheld as an anticipation of the final obligation of the transferor. The other approach consists in considering the withholding amount as final, without any possibility of adjustment.

Among countries that use a withholding tax mechanism, Canada and Australia apply a withholding tax to the gross value of the transaction, not an approximation of the net gain. This means that taxpayers are often withheld more than they owe, and they have an incentive to file an annual tax return in the country, even if they are not residents, in order to get a refund. By proposing to withhold tax on an approximation of the net amount, the implication of the AG proposal is that in most transactions, the difference between the withheld amount and the final tax should be small.

The example of Australia might be an interesting one to consider. In Australia, the transferee has the obligation to withhold 12.5% of the purchase price in respect to the foreign resident capital gain. The withholding tax is non-final, meaning that the amount to be withheld is an estimate of the transferor's liability. The non-resident transferor can credit the amount withheld from the final payment due, which will be calculated in accordance with the actual net gain. The transferor can claim an exemption to the withholding rule if it demonstrates that the actual gain is lower than the amount that is to be withheld by the transferee. If the transferor has not claimed the exemption and the final tax liability is in fact lower than what had been withheld, the transferor can claim a refund.

Basing the withholding tax on the gross value of transactions might be easier for contractors to comply with and for the ISA to monitor. However, the trade-off could be higher differences between the withheld amount and the final payment of the tax, which implies more oversight and good cash flow management by the ISA.

Risk of Double Taxation

Taxation of offshore indirect transfers by the source country is a form of source taxation; that is, the taxing right exists because there is an asset or right situated in the country and whose value

influences the value of the offshore transaction. This link between the local asset and the foreign transaction is the justification for taxation.[8]

In the case of DSM, considering that the assets and rights are located in the Area, and that the Area is under the jurisdiction of the ISA, no other country would bear the economic connection to the asset to justify any taxation on such gains, since the asset would be located outside of their jurisdictions.

Some countries may tax the capital gains arising from the sale of the *shares*—and not necessarily look at the *assets*. In this case, there is a risk of double taxation, since there would be two different taxpayers subject to taxation in respect of the same economic income, referred to as "economic double taxation." This risk is not unique to DSM; it is also shared by land-based mining and business taxation more broadly.

In practice, the double taxation of capital gains for offshore indirect transfers is not commonly observed. One possible reason is that taxpayers will likely structure their transactions in jurisdictions that will not tax capital gains, or at least offer a foreign tax credit. When such a double taxation situation occurs, bilateral tax treaties usually provide for measures such as credit or deductions.

Tax treaties are not the only vehicle for relieving double taxation. Most countries provide some level of relief from double taxation unilaterally. Many cases of residence-source juridical double taxation can therefore be eliminated through domestic provisions (ordinarily in the form of either the exemption or a credit method), which operate without the need for tax treaties (PCT, 2021). The ISA could provide for double tax relief in the Mining Code, leaving any remaining disputes between states or contractors and the ISA to be settled through the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea (UNCLOS, Article 187). The ISA could also invite its members to commit to offering unilateral tax relief on capital gains tax to residents in their jurisdictions who are subject to the "indirect transfer of rights" tax in the Area.

The introduction of an "indirect transfer of rights" tax will create the risk of double taxation with the parent jurisdictions where the contractors and controlling entities and shareholders are incorporated. This risk is not unique to DSM, as it is common that taxation of cross-border income raises double taxation risks whenever different states bear rights to tax the same income. International tax norms attribute primary capital gains taxing rights to source jurisdictions, and bilateral tax treaties provide for methods to avoid double taxation. In the absence of a bilateral tax treaty, the solution is the unilateral relief granted by the jurisdictions where controlling entities and shareholders are located.

[8] The existence of a link between the asset and the foreign transaction as a justification to tax can be deduced from the wording of the Art. 13 of the UN and OECD Model Conventions, as well as the Commentaries, which attributes taxing rights to the jurisdiction where the asset is located. The justification for that is usually referred to as the "economic allegiance theory," which can be defined as a genuine link established between the taxable income and the state (Schön, 2009, p. 90–91). Such a link is evident in the case of immovable property since there is an evident physical connection to the land (Li & Avella, , 2018, Chapter 1.1.2.1).

Proportioning the Gain

A typical concern with capital gains taxes on offshore indirect transfers of assets is that it may be difficult to segregate the proportion of capital gains that is actually derived from exploitation rights under an exploitation contract and the parts of a company's business located in other jurisdictions, such as IPs and patents. This issue is of particular importance to determine whether the ISA will be able to levy the "indirect transfer of rights" tax when the gain from the sale of shares in an entity also partially derives from other parts of the business which are not located in the Area.

Most of the assets used in land-based mining activities are located within the same jurisdiction. It is common that the mines, quarries, and warehouses, as well as the related licenses and rights, and sometimes processing facilities, are found in the same country. In the case of DSM, while the extraction and licenses are indeed located in the Area, it is possible that related capital assets, vessels, smelters, and other rights may be found in one ore more other country(ies). The sale of an entity holding the entire business can give rise to capital gains whose value derives from underlying assets found in different jurisdictions.

The proposal discussed below, triggers a tax on the "indirect transfer of rights" when there is an alienation of shares deriving value from certain rights and assets located in the Area. In order to determine whether the value of the transaction is derived from the value of the underlying assets, it is important to understand how to value shares and mining assets.

The price of a transaction between unrelated parties typically reflects the value of the shares being transferred. The value of the shares depends on the assets owned and obligations assumed by the company. This value can be affected by potential future events and contingencies, such as the commercial potential and liabilities.

The goal is to determine the fair market value of all assets and liabilities and allocate them with reference to the purchase price. In order to do that, the taxpayer can be required to present an independent appraisal and a valuation report. This is particularly important when there are several assets, including non-mining assets, in the portfolio held by the company whose shares are being alienated. Once the valuation is concluded, if the relevant mining asset in question exceeds 50% of the transaction's entire value, then the ISA will have powers to levy the "indirect transfer of rights" tax.

It should be noted that if typical DSM businesses own significant assets outside of the Area, the 50% threshold would rarely be reached in an indirect transaction. The ISA would not therefore have a taxing right on the gains. The ISA could consider a lower threshold to encompass sales of shares when less than 50% of their value derives from assets located in the Area, and adopting a pro-rata rule to only tax the gains deriving from assets in the Area.

Finally, it is important that the regulations provide guidance on how the market value of the relevant assets and liabilities should be determined, specifying the relevant valuation methods and selecting the most appropriate method and the practical approaches that should be used for this purpose.

Documentation and Notification Requirements

Proposed Reg. 23, par. 5 reads: "5. The Commission shall consider whether the Transferor and Transferee have submitted all documentation relating to the Direct Transfer of Rights Tax and whether that tax has been paid to the Authority by the Transferor.".

It is a good compliance measure to have the Commission check whether the documentation has been properly submitted and tax has been collected. The transferor and transferee will necessarily have to update the registry, and the transferee will have a strong interest in having a valid license. The provision could be strengthened by making it clear that the Commission can restrict the transfer, renewal, or validity of licenses unless all tax obligations have been met.

A similar provision could be included for the "indirect transfer of rights" tax. The regulations should also include the obligation to inform the Authority and update the license with regard to changes in the corporate structure or beneficial ownership. This is because an offshore indirect transfer typically takes place high up the corporate chain and changes occur mainly at the level of beneficial owners. As the local licensee will likely remain the same legal entity, in the absence of an obligation to inform or update the license registries in case of a change in the ultimate beneficial owner, the Authority might not even be informed of an offshore indirect transaction taking place.

Going further, considering the public interest in the exploitation of the Area, the ISA could establish a public registry of beneficial owners of mining licenses in the Area, following best practice in land-based mining as described in the EITI requirements on disclosing beneficial ownership:

> As of 1 January 2020, it is required that implementing countries request, and companies publicly disclose, beneficial ownership information. This applies to corporate entity(ies) that apply for or hold a participating interest in an exploration or production oil, gas or mining license or contract and should include the identity(ies) of their beneficial owner(s), the level of ownership and details about how ownership or control is exerted. (…)
>
> Information about the identity of the beneficial owner should include the name of the beneficial owner, the nationality, and the country of residence, as well as identifying any politically exposed persons. It is also recommended that the national identity number, date of birth, residential or service address, and means of contact are disclosed. (…)
>
> Definition of beneficial ownership:
>
> i. A beneficial owner in respect of a company means the natural person(s) who directly or indirectly ultimately owns or controls the corporate entity.
>
> ii. The multi-stakeholder group should agree an appropriate definition of the term beneficial owner. The definition should be aligned with (f)(i) above and take international norms and relevant national laws into account, and should include ownership threshold(s). The definition should also specify reporting obligations for politically exposed persons.

iii. Publicly listed companies, including wholly-owned subsidiaries, are required to disclose the name of the stock exchange and include a link to the stock exchange filings where they are listed.

iv. In the case of joint ventures, each entity within the venture should disclose its beneficial owner(s), unless it is publicly listed or is a wholly-owned subsidiary of a publicly listed company. Each entity is responsible for the accuracy of the information provided. (EITI, n.d.)

Sourcing and Change of Ownership Thresholds

Proposed Reg. 23, par. 1, first part reads: **"The Authority shall levy a 25% Indirect Transfer Tax on any gain made from the transfer of a 20% or greater interest in any entity which derives 50% or more of its value, directly or indirectly, and regardless of where that entity is incorporated,** from rights under Exploitation Licenses, assets used to undertake commercial mining under Exploration Licenses, and activities undertaken in the Area.".

The proposed provision contains two different thresholds: a de minimis threshold (20% or greater interest) and a sourcing rule threshold (50% or more of its value).

- The "de minimis threshold" refers to the minimum interest in the asset that has to be transferred in order to allow taxation. Transactions falling below the de minimis threshold are not subject to tax. Such a threshold is intended to exclude smaller transactions from the scope of the rule, as to avoid unnecessary compliance costs. This is usually the case of investors trading in the stock exchange. In the African Group proposal, the de minimis threshold is 20% or greater interest in an entity.

- The "sourcing rule threshold" assures that only gains substantially related to assets located in the country will fall within the scope of the tax rule. In other words, the threshold is designed to ensure that only transactions whose value is principally derived from assets in the country will be subject to taxation in such country. In the case of DSM, it means that only gains that substantially derive their value from assets in the Area would be subject to the "indirect transfer of rights" tax. In the African Group proposal, the sourcing rule threshold is 50% or more of its value from rights and assets in the Area.

There is no standard practice in the adoption of the de minimis threshold, as it is not expressly contemplated in the OECD and UN Model Tax Conventions. The de minimis rule may need to be considered to prevent a situation in which the transfer of every single share (such as small investors in the stock exchange) triggers the taxation, as this would result in undue tax compliance burden for a small amount of tax. For instance, Mongolia adopts a 20% de minimis threshold, and Argentina adopts a 10% threshold. The 20% de minimis threshold could be reduced to only exclude smaller transactions.

The international practice in the OECD and UN Model Tax Conventions is to allow the taxation of the entire gain when the value of the indirect interest is principally (i.e. more than 50%) derived from local immovable property. Most countries adopt this approach.[9]

However, some resource-rich countries have adopted thresholds lower than 50% to allow the taxation of offshore transfers, even when the value of such transfers is only partially derived from the asset. A lower-threshold approach is adopted by Argentina (30% sourcing rule threshold), Ecuador (20%), and Kenya (20%). This matters when the value of the shares of the company being sold reflect not only the underlying mineral asset such as a mining license, but also other portfolio assets (e.g., contracts, IP rights, and other assets), or when the shares derive value from mining ventures in several countries.

An example to better understand the sourcing rule threshold is to consider the sale of 100% shares in an entity A at the value of $1,000. If A's only asset is the interest held in the sponsored entity B, and B does not have any other assets other than the mining asset in question, it is fair to conclude that the price of $1,000 derives 100% from the mining asset. This transaction would meet the 50% threshold. On the other hand, if A's assets included a portfolio of different assets other than the participation in B, such as IP rights, participation in other entities, and so on, it is necessary to verify to what extent the mining asset contributes to the determination of the purchase price of $1,000. If the mining asset represents less than 50% of the purchase price, then the threshold is not met and taxation is not triggered unless the sourcing rule threshold is set at a lower rate.

Adopting a lower threshold raises the issue of determining the tax base. When the 50% threshold is triggered, it is common that countries will be entitled to tax the entire gain. However, when a lower threshold is set (i.e., less than 50%), it may be appropriate to only tax the proportion of the gain attributable to assets located in the country—that is, adopting a so-called "pro rata" rule. The rationale is to exempt parts of the tax base that derive from assets located in other jurisdictions and eliminate potential double taxation to the extent that such gains may also be taxable in these other jurisdictions. While this might be considered a fairer application of the tax, it introduces the complexity of having to determine the proportion of the gain relating to the sale of the resource asset or right. However, the burden of determining the assets market value relies mostly with the transferor and transferee, who have an interest in valuing the different elements of the company's assets anyway.

The ISA could consider a lower threshold to encompass sales of shares when less than 50% of the value derives from assets located in the Area. It could also consider adopting a pro-rata rule to only tax the gains deriving from assets in the Area.

[9] Examples of countries that adopt the 50% threshold include Canada, Chile, Papua New Guinea, Peru, and Uganda.

Taxable Asset Rule and the Definition of Immovable Property

Proposed Reg. 23, par. 1, final part, reads: "1. The Authority shall levy a 25% Indirect Transfer Tax on any gain made from the transfer of a 20% or greater interest in any entity which derives 50% or more of its value, directly or indirectly, and regardless of where that entity is incorporated, **from rights under Exploitation Licenses, assets used to undertake commercial mining under Exploration Licenses, and activities undertaken in the Area.**".

The legal provision should make it clear what the scope of the rule is—that is, which assets being alienated are relevant to trigger taxation. This is referred to as the taxable asset rule. The taxable asset rule should define clearly which assets and rights are considered in the scope of the rule. The suggested provision considers in its scope the rights under exploitation licenses, the assets used under exploration licenses, and activities undertaken in the Area.

The scope could be better defined to include not only rights and assets under both exploitation and exploration licenses, but also the licenses themselves, as well as shares and similar interests in entities holding those licenses. Also, it is difficult to determine what the sale of an activity consists of when activities are included in the scope of the rule.

Countries like Namibia and Ecuador typically include both licenses and shares in companies holding those licenses. Provisions from these countries' tax acts are reproduced below.

Namibia Income Tax Act (ITA is from 1981, the capital gain provision was included by Tax Act 15/2011)
Art. 1, (o) any amount received or accrued from another person as consideration (or payment of like nature) or the open market value by way of a sale, donation, expropriation, cession, grant or other alienation or transfer of ownership of a mineral licence as defined in the Minerals (Prospecting and Mining) Act, 1992 (Act No. 33 of 1992), or right to mine minerals in Namibia, and includes a sale of shares in a company for a mineral licence or right to mine minerals in Namibia.

Ecuador – Income Tax Act
Art. 39 Profits obtained by a company or by a natural person not resident in Ecuador, from the direct or indirect disposal of shares, participations, other rights representing capital or other rights that allow exploration, exploitation, concession or similar, of companies domiciled or permanent establishments in Ecuador, shall be subject to the payment of the rates contained in the corresponding progressive table provided in this Law for this purpose.

Anti-fragmentation Rule

Proposed Reg. 23, par. 2, reads: "Any series of transfers that could have been undertaken as a single transfer, but which were undertaken as a series of transfers so as, in the sole opinion of the Authority, to avoid the 25% Indirect Transfer Tax, shall be treated as if they were a single transfer.".

Anti-fragmentation rules are important to prevent taxpayers from structuring multiple transactions in order to fall outside the de minimis threshold, and thus, avoiding taxation.

The proposed provision contains an element of subjectivity, i.e., it refers to the "sole opinion of the Authority" to determine whether the multiple transactions were structured with the intention to avoid taxation. This provision brings uncertainty for investors and burdens the ISA with having to demonstrate that there was an intention to avoid tax.

The recommended approach by the OECD and the UN Model Tax Conventions is to consider gains from the sale of shares in the timeframe of 365 days as a single transaction. One option is to eliminate the reference to "the sole opinion of the Authority" and establishing a fixed time period of 365 days to better align with the OECD and UN recommendations. It is also possible to extend this time period. For example, Canada uses a 60-month window to calculate the threshold that triggers the definition of a taxable Canadian property (Canada Income Tax Act, 248 (1)).

Liable Persons

Proposed Reg. 23, par. 3, first part, reads: **"The transferee shall be responsible, regardless of where that entity is incorporated, for:** a. calculating the value of the gain as equal to the gross consideration to be received by the transferor minus the paid-in capital of the transferor.;"

Capital gain taxes are taxes imposed on gains made by the transferor. When taxing non-residents, the main enforcement concern is that the person making the gain is located abroad, out of reach, as it is harder for any tax administration to impose taxation in other countries.

Establishing the withholding tax obligation on the transferee is an effective measure since the transferee will have the funds and will be able to withhold the tax due from the purchase price to be paid to the transferor. Moreover, the transferee is likely to be more compelled to have the license compliant with the proper obligations in order to operate. However, if the transferee is also located in another jurisdiction, the same enforcement challenge will arise. One option is to establish a joint liability between the transferor and the transferee.

An additional liable person could be the sponsored entity, since in principle it would be easier to collect tax in the sponsoring state than elsewhere abroad.

Tax Base for Withholding Tax

Proposed Reg. 23, par. 3, final part, reads: **"**The transferee shall be responsible, regardless of where that entity is incorporated, for: **a. calculating the value of the gain as equal to the gross consideration to be received by the transferor minus the paid-in capital of the transferor.;"**

The tax base for the withholding tax, if defined as the net gain, should be equal to the gross consideration (the purchase price) minus the acquisition costs. The acquisition costs are the costs associated with the acquisition of the investment or asset in the Area and can be determined with reference to the book value of the entity. The paid-in capital of the transferor is meant to approximate its acquisition costs.

The risk with the current formulation of this provision is that it could be interpreted as referring to the paid-in capital of the transferor beyond the Area. Allowing companies to offset losses against gains in other sales is more commonly observed when companies have a presence in the country. For foreign companies, this kind of provision is not common since it would require the source country (in this case the ISA) to track the losses made by foreign companies and review future transactions, whose gains would be deducted by those credits. It is common to have countries' legislation be silent in this respect.

As for the expenditures, the regulations can provide guidance on how the acquisition cost (or paid-in capital) should be determined. In some cases, expenditures can be considered and add up to the acquisition cost. This is the case of Kazakhstan, for example (detailed in the following box), which contains guidance in its legislation on which expenses can be aggregated to the cost.

The Tax Code of Kazakhstan uses the historical cost of asset or participation interest, which it defines in Article 228, paragraph 7 as follows:

> 7. Historic cost of the participation interest shall be: aggregate of actual costs of its acquisition, costs associated with acquisition and increasing the value of the participating interest in accordance with international financial reporting standards and requirements of legislation of the Republic of Kazakhstan on accounting and financial reporting.

Alternatively, as discussed, the transfer of rights tax could be designed as a withholding tax on the gross consideration, eliminating the need to verify the gain, but at a lower rate. In such a system, if the withholding tax were considered non-final, there would be a need for important readjustment of the tax by the transferor.

Anti-avoidance

Proposed Reg. 23, par. 4, in part reads: "The Authority may revoke without compensation the Exploitation License that has been transferred when the Transferee has: (…) b.) intentionally underestimated the tax liability under the Indirect Transfer Tax; or."

Specific anti-avoidance concerns are addressed by other provisions, such as the anti-fragmentation rule mentioned previously. This provision contains an anti-avoidance rule based on the intentional underestimation of the tax liability.

Reference to an "intentional underestimation" of the tax liability places the burden of proof on the ISA, requiring it to demonstrate that there was an intention to avoid paying tax, which increases complexity and requires administration capacity. Also, if the ISA claims that there was an intention to avoid tax, it is likely that the taxpayer will dispute it, and the ISA must be prepared to deal with potential assessment procedures and litigation that could follow.

The provision does not indicate whether the taxpayer would be able to complement the tax amount in case of underestimation by mistake. In this case, a penalty for late payment could also be considered. Having a settlement alternative would give the transferee a chance to pay the tax liability and avoid having their license revoked. It would also save on litigation costs.

Considerations

The African Group Proposal of a levy on the transfer of rights is broadly in line with international practice and represents a good basis for discussion. Our review leads to the following considerations:

- Consider the trade-offs in choosing to levy the withholding tax on the gross versus the net gains in a transaction. Levying a withholding tax on the gross value of a transaction would be easier but would entail a more frequent and important reconciliations ex post.
- Consider a lower threshold to encompass sales of shares when less than 50% of the value derives from assets located in the Area. As well, consider adopting a pro-rata rule to only tax the gains deriving from assets in the Area.
- Consider lowering the 20% de minimis threshold to only exclude smaller transactions.
- Consider including licenses themselves, as well as shares and similar interests in entities holding those licenses in the definition of taxable assets and immovable property.
- Consider including the obligation to inform the Authority and update the license with regard to changes in the corporate structure or beneficial ownership. Going further, the ISA could establish a public registry of beneficial owners of mining licenses in the Area, following best practice in land-based mining, as described in the EITI requirements on disclosing beneficial ownership.
- Consider including the sponsored entity as an additional liable person, since it would be in principle easier to collect tax in the sponsoring state than elsewhere abroad.
- To strengthen the proposed anti-fragmentation rule, consider eliminating the reference to "the sole opinion of the Authority" and establishing a fixed time period of one to five years, in line with international practice.

8. Fiscal Stabilization

The Draft Regulations treat the system and rates of payment differently for stabilization purposes:

- Regulation 81 (system of payments) gives the ISA the power to review the system of payments every five years from the first date of commencement of commercial production in the area and at intervals thereafter as determined based on need. Notwithstanding this provision, any changes to the system of payments for existing exploitation agreements may only be made with the contractors' consent. In effect, the payment system is stabilized for the tenure of the contract, which is 30 years, unless the contractor agrees to the changes.

- Regulation 82 (rates of payment) gives the ISA the power to review the rates of payment at different intervals. It does not specify a review period. Unlike Regulation 81, any changes to the rates of payment will apply to existing contractors but only from the end of the second period of commercial production. The actual time frame is yet to be defined. Since the regulations do not mention the third period of production, it is assumed that the end of the second period is the end of the 30-year contract.

The periodic review of the financial terms of extractive industry contracts is increasingly seen as best practice. The potential stabilization of the system and rates of payment for the tenure of a contract (up to 30 years in this case) is not. The 2020 OECD *Guiding Principles on Durable Extractive Contracts* is the most recent international standard on the design and use of fiscal stabilization clauses, when and if they are used. Paragraph 54 of the commentary is the most relevant to fiscal stabilization, stating:

> 54. In cases where investors perceive there to be high fiscal or political instability, they may seek the inclusion of fiscal stabilisation clauses to reduce these risks. Host governments may not need to offer or accept to include stabilisation clauses, as they could still attract the required investment through strong constructive negotiations and open competitive bidding involving technically and financially capable investors. Where governments decide they are necessary, fiscal stabilisation provisions can be designed to minimise the general tax policy impact, by limiting its scope to specific key fiscal terms (not all fiscal terms), such as agreed rates, for a specific period of time (not indefinitely), and possibly by applying a stability premium on tax rates. Commensurately, for extractive contracts to be durable, they should contain clear obligations on investors to pay their full share of taxes under the contract and applicable law and the clear rights of the host governments to enforce those obligations. The adoption of bona fide anti-avoidance measures or the interpretation of existing laws by host governments to protect the revenue base against tax base erosion and profit shifting (e.g. on interest deduction limitations and transfer pricing) and consistent with internationally recognised tax practices should not be considered a change in law constrained by stabilisation clauses. (OECD, 2020)

The implication here is that fiscal stabilization, if used, should not be based on a notion of automaticity in regulations or in a negotiation, but on demonstrated need. It is a commercial choice: if the host state (which in this instance is the ISA) receives proper value from the potential investment or risks seeing the investment completely foregone by this or other potential investors,

then it may choose to enter into negotiations for a stabilization clause. If the ISA chooses to offer fiscal stabilization, it should be limited to what is necessary to achieve the identified needs:

- Limiting the scope to key fiscal terms and not including all fiscal terms.
- Limited and defined time periods, not the full life of a contract or investment, and thus, inherently, not for renewals or extensions of the contract.
- Possibly applying a stability premium to the tax rates so the stabilization regime is, in effect, purchased from the ISA.

In summary, the OECD Guiding Principles call for a minimization of fiscal stabilization—and targeted use if it is used at all. This is in stark contrast to the ISA Draft Regulations, which propose universal, unlimited stabilization of the payment systems for the tenure of a mining contract, up to 30 years. Such an approach is outside the normative frameworks that govern fiscal stabilization in the extractives sector, as well as the trend in land-based mining contract negotiations.

ISA stakeholders seem to be heading towards bringing the regulations closer to current international practice. The Chair's revised draft text proposes to remove the condition that contractors must consent to changes to the system, or rate of payments, after the first five years of commercial production. There is also a proposal to review the system and rates of payment at regular, predictable intervals, and for this to explicitly cover updates to the price triggers for a variable price-based royalty under Option 4 (ISA, 2019, Section 7, Regulations 81 and 82).

9. Conclusion

This analysis, and that of other stakeholders, indicates that an equalization measure could be an effective way to ensure that all contractors pay a similar level of tax. Without such a measure, some contractors with favourable tax deals in their sponsoring states may end up with an AETR significantly below the target rate. This would disadvantage other contractors and result in a loss of potential revenue to the ISA.

There are different ways to equalize the level of taxation between contractors. This report analyzes the additional royalty proposed by the African Group and put forward an alternative option which seeks to balance administrative and capacity concerns with the need for the regime to be responsive to changes in profitability. Further technical work is needed to develop both options and potentially others.

Finally, a proposal to levy a tax on the transfer of DSM rights and interests would represent a source of potential revenue for the ISA. Gains from the transfer of mineral rights typically generate hundreds of millions of dollars for the industry. The African Group's proposal could be strengthened by including exploration rights, adding some technical specifications and transparency requirements, and choosing thresholds that are adapted to the DSM business model.

As stated in the disclaimer, this paper is a technical document in response to a request by the ISA. It is based on the IGF Secretariat's expertise in Land Based Mining Taxation. It should not be understood to reflect a position of IISD, the IGF, or of IGF member states, on deep sea mining. The IGF Secretariat is not a party to the ISA and does not express opinions on any action taken by the ISA regarding the exploitation regulations applicable to deep sea mining.

References

Albertin, G., Yoncheva, B., Devlin, D., Devine, H., Gerard, M., Beer, S., Jankulov Suljagic, I., & Thakoor, V. V. (2021). *Tax avoidance in sub-Saharan Africa's mining sector.* International Monetary Fund. https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2021/09/27/Tax-Avoidance-in-Sub-Saharan-Africas-Mining-Sector-464850

Baunsgaard, T. & Devlin, D. (2021). Resource-rich developing countries and international tax reforms. In R. A. de Mooij et al. (Eds.), *Corporate Income Taxes under Pressure: Why Reform Is Needed and How It Could Be Designed*. International Monetary Fund. https://www.elibrary.imf.org/display/book/9781513511771/ch015.xml

Bouterige, Y., de Quatrebarbes, C., & Laporte, B. (2020). *Mining taxation in Africa: What recent evolution in 2018?* Summary brief Number 21. FERDI & ICTD. https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/15184/ICTD_SummaryBrief_21_Online.pdf?sequence=1&isAllowed=y

Extractives Industries Transparency Initiative (EITI). (n.d.). Beneficial ownership: Knowing who owns and controls extractive companies. https://eiti.org/beneficial-ownership

FAST Standard Organisation. (n.d.). Home page. https://www.fast-standard.org/

Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2021). *Protecting the right to tax mining: Tax treaty practice in resource-rich countries.* https://www.igfmining.org/beps/resources/protecting-right-to-tax-mining-income-tax-treaty-practice-mining-countries/

International Monetary Fund (IMF). (n.d.). Fiscal Analysis of Resource Industries (FARI). https://www.imf.org/en/Topics/fiscal-policies/fiscal-analysis-of-resource-industries

International Seabed Authority (ISA). (2019). Draft regulations on exploitation of mineral resources in the Area. https://www.isa.org.jm/wp-content/uploads/2022/06/isba_25_c_wp1-e_0.pdf

Li, J., & Avella, F. (2018). Article 13: Capital Gains. In *Global Tax Treaty Commentaries*. Amsterdam: IBFD.

Natural Resource Governance Institute (NRGI). (2015). *Fiscal regime design: What revenues the government will be entitled to collect*. In NRGI Reader, March. https://resourcegovernance.org/sites/default/files/nrgi_Fiscal-Regime-Design.pdf

Organisation for Economic Co-operation and Development (OECD). (2020). *Guiding principles on durable extractive contracts.* https://www.oecd.org/dev/Guiding-Principles-Durable-Extractive-Contracts-2020.pdf#:~:text=The%20Guiding%20Principles%20for%20Durable%20Extractive%20Contractsmark%20an,negotiate%20a%20fair%20deal%20for%20governments,%20investors,%20andcommunities

OECD & IGF. (2022). *Tackling multinational tax avoidance in Mongolia from building modern legal frameworks and mining industry expertise to a major audit outcome*. https://www.oecd.org/tax/tax-global/tackling-multinational-tax-avoidance-in-mongolia.pdf

Open-ended Working Group (OEWG). (2023). Enclosure III: Draft Standard. In Draft text for the payment system, including revised draft regulations on exploitation of mineral resources in the Area. https://www.isa.org.jm/wp-content/uploads/2023/03/CRP2-OEWG-Chair-revised-text-1-1.pdf

Platform for Collaboration on Tax (PCT). (2021). Toolkit on tax treaty negotiations. https://www.tax-platform.org/sites/pct/files/publications/The%20Toolkit%20on%20Tax%20Treaty%20Negotiations%20Toolkit_Updated%20052021.pdf

Pricewaterhouse Coopers (PwC). (n.d.) Capital gains tax (CGT) rates. Worldwide Tax Summaries (database). https://taxsummaries.pwc.com/quick-charts/capital-gains-tax-cgt-rates

Schön, W. (2009). International tax coordination for a second-best world (part I). *World Tax Journal*, *1*(1).

United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397. https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en

United Nations. (1994). 1994 Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. https://www.un.org/depts/los/convention_agreements/texts/agreement_part_xi/agreement_part_xi.htm

United Nations. (2021). Commentary on Article 13. In *United Nations Model Double Taxation Convention Between Developed and Developing Countries 2021.* https://www.un.org/development/desa/financing/sites/www.un.org.development.desa.financing/files/2022-03/UN%20Model_2021.pdf

Wen, J. F. (2018). *Progressive taxation of extractive resources as second-best optimal policy.* International Monetary Fund. https://www.imf.org/en/Publications/WP/Issues/2018/06/13/Progressive-Taxation-of-Extractive-Resources-as-Second-Best-Optimal-Policy-45923

Wilde, D. (2022). An evaluation of the payment regime for deep seabed polymetallic nodule mining in the area. In R. Sharma (Ed.), *Perspectives on Deep-Sea Mining: Sustainability, Technology, Environmental Policy and Management*. Springer International Publishing.

Appendix 1. The IGF Financial Model

The quantitative analysis of the four options is based on key results from the IGF financial model for DSM. The underlying assumptions of the IGF model are taken from the MIT model, including the capital expenditure, operating expenditure, life cycle of the project, production level, and rates.

However, there are several modifications made to the MIT assumptions:

1. **Project financing assumption:** IGF understands that under current conditions, contractors are unable to obtain debt financing because of high uncertainty surrounding DSM. It expects that this will change over time and so have included an option for debt financing in the model. The model includes typical debt financing at 60%, which will only start from the design-and-build phase (after the feasibility phase). The impact on the AETR is around 1%; ISA revenue is barely impacted; it mainly affects sponsoring states. The contractor shareholder IRR would improve by around 4%.

2. **Processor return**: See the discussion in the next section.

3. **Price of nodules**: The model uses the same price assumptions as the MIT. However, it uses a simple index to inflation in the model, rather than a Monte Carlo simulation for the price variations. The difference between the two approaches is relatively insignificant: 3% of total revenue and a change in the contractor IRR of around 1%. Table 3 contains baseline price assumptions.

4. **Depreciation arrangements:** The MIT model uses a capital carryover method to integrate the capital expense during the first years of production for the tax deduction. The IGF model uses a regular straight-line depreciation method starting from the production year. It is set at 10 years by default, but it can be changed easily by the user. It uses straight line depreciation because it is considered more neutral given that sponsoring states will have different depreciation approaches.

5. **Profit share:** MIT models the profit share based on accounting profit. IGF has chosen pre-tax cash flows considering that the accounting profit can be impacted by the depreciation approach or local tax rules in different jurisdictions.

Table 3. Baseline price assumption of the MIT/IGF model

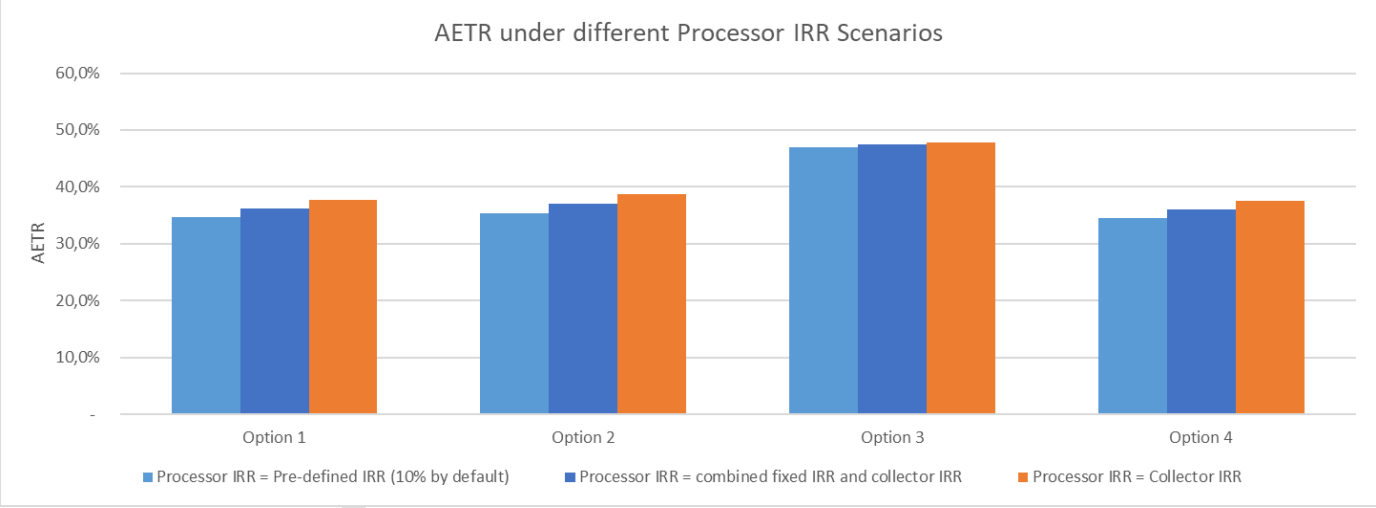
Price	Figure	Currency
Manganese metal	1,560	US$/T
Manganese ore	4.75	US$/DMTU
Nickel	20,000	US$/T
Cobalt	60,000	US$/T
Copper	9,000	US$/T

Determining the Processors' Internal Rate of Return

The MIT model uses the assumption that the contractor sells the nodules to the processor, and the charge is calculated as percentage of the nodule value (a kind of profit split) given the same after-tax IRR of contractor and processor. IGF understands that the reason for this choice is because processors are potentially exposed to more risk than the contractors, at least in the short term, while the industry develops. igf agree that this may be the case for the first movers, meaning the first companies extracting nodules from the Area; however, the risk to the processor is likely to decrease with each processing facility that is built. In the long run, it is reasonable to expect that nodule processors will have similar economics to independent land-based mining refineries. These refineries typically do not share in the profits (or losses) of mining companies, but instead charge processing (treatment and refining) fees. This is one more factor of uncertainty, emphasizing the need for the ISA to design a fiscal regime that can accommodate the economics of first movers without building massive giveaways into its mining code to companies entering a mature and possible very profitable market in the future.

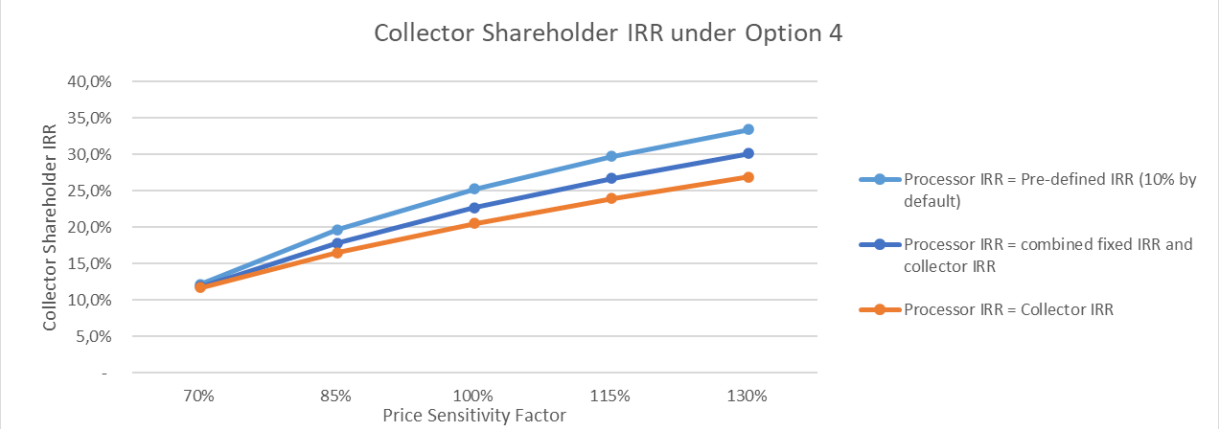
Consequently, the IGF model includes the option of the contractor receiving revenue from the sale of nodule and the processor charging a fixed fee for processing (similar to a tolling arrangement). The fee itself is based on a target internal rate of return for the processor. In line with this assumption, IGF compared three options: 1) setting the processor IRR equal to 10%, 2) setting it equal to the contractor IRR, and 3) a middle ground option: setting the processor IRR as the average of 10% and the contractor IRR.

Figure 13. AETR under three processor IRR approaches



The AETR is highest when the processor IRR is set to equal the contractor IRR. However, just because the AETR is higher does not mean the ISA or the sponsoring state collect more revenue under this scenario. This is because the contractor's profits decrease as the processor's IRR increases, leaving more profit to flow to the processor, and consequently the processor state, and less profit flowing to the ISA. The results of price sensitivity are similar for all four payment regimes. Figure 14 shows an example of how the contractor shareholder IRR responds to price variations under Option 4.

Figure 14. Sensitivity analysis of contractor shareholder IRR for price variation



Processor IRR plays an important role in the determination of the design of the fiscal regimes. IGF propose as a target an average processor IRR, a combination of, for example, 50% fixed-rate IRR (10%) and 50% contractor IRR, considering that the risk undertaken by the processor decreases in the long run.

Sensitivity Analysis

Sensitivity analysis is a way to test how the regimes are likely to perform depending on profitability, measured by changes in price and cost. Without this analysis, any conclusions will be extremely limited: two (or four) fiscal regime options can generate the same AETR under a certain set of assumptions. But when these assumptions change, so will the AETR of the two (or four) options, especially when these different options have different levels of progressivity. Given the level of uncertainty on the future of DSM, it is important to consider fiscal regimes that are robust to very different assumptions about the future profitability of DSM projects.

Table 4 shows the sensitivity scenarios analyzed in the IGF model. The base scenario is the parameter value set by default. As the price is more volatile, the price variation ranges from 70% to 130% of the baseline with a 15% interval. For the cost parameters, the analyzed variation is from 80% to 120% with a 10% interval.

Table 4. Sensitivity scenarios of the IGF model

Parameters	Units	Minimum	Low	Base	High	Maximum
Manganese metal price	US$/T	1,092	1,326	1,560	1,794	2,028
Manganese ore price	US$/DMTU	3.325	4.0375	4.75	5.4625	6.175
Nickel price	US$/T	14,000	17,000	20,000	23,000	26,000
Cobalt price	US$/T	42,000	51,000	60,000	69,000	78,000
Copper price	US$/T	6,300	7,650	9,000	10,350	11,700
Operating expenditure	%	120%	110%	100%	90%	80%
Capital expenditure	%	120%	110%	100%	90%	80%

Appendix 2. Jurisdictions that have capital gains tax rules in their tax systems

According to a survey prepared by Pricewaterhouse Coopers and last updated in 2022 (PwC, n.d.), the majority of countries tax capital gains. The survey considered 151 jurisdictions, 133 of which have rules in their legal systems to tax capital gains, which represents 88% of the jurisdictions covered. The list of jurisdictions with capital gains tax rules is as follows:

1. Albania
2. Algeria
3. Angola
4. Argentina
5. Armenia
6. Australia
7. Austria
8. Azerbaijan
9. Belgium
10. Bolivia
11. Bosnia and Herzegovina
12. Botswana
13. Brazil
14. Bulgaria
15. Cabo Verde
16. Cambodia
17. Cameroon, Republic of
18. Canada
19. Chad
20. Chile
21. China, People's Republic of
22. Colombia
23. Congo, Democratic Republic of the
24. Congo, Republic of
25. Costa Rica
26. Croatia
27. Cyprus
28. Czech Republic
29. Denmark
30. Dominican Republic
31. Ecuador
32. Egypt
33. El Salvador
34. Equatorial Guinea
35. Ethiopia
36. Fiji
37. Finland
38. France
39. Gabon
40. Georgia
41. Germany
42. Ghana
43. Greece
44. Greenland
45. Guatemala
46. Guyana
47. Honduras
48. Hungary
49. Iceland
50. India
51. Indonesia
52. Iraq
53. Ireland
54. Israel
55. Italy
56. Ivory Coast
57. Jamaica
58. Japan
59. Jordan
60. Kazakhstan
61. Kenya
62. Korea, Republic of
63. Kosovo
64. Kuwait
65. Kyrgyzstan
66. Latvia
67. Lebanon
68. Libya
69. Liechtenstein
70. Lithuania
71. Luxembourg
72. Macau SAR
73. Madagascar
74. Malawi
75. Malaysia
76. Maldives, Republic of
77. Malta
78. Mauritania
79. Mexico
80. Moldova
81. Mongolia
82. Montenegro
83. Morocco
84. Mozambique
85. Myanmar
86. Netherlands
87. New Zealand
88. Nicaragua
89. Nigeria
90. North Macedonia
91. Norway
92. Oman
93. Pakistan
94. Palestinian territories
95. Panama
96. Papua New Guinea
97. Paraguay
98. Peru
99. Philippines
100. Poland
101. Portugal
102. Puerto Rico
103. Qatar
104. Romania
105. Rwanda
106. Saudi Arabia
107. Senegal
108. Serbia
109. Slovak Republic
110. Slovenia
111. South Africa
112. Spain
113. Sri Lanka
114. Sweden
115. Switzerland
116. Taiwan
117. Tajikistan
118. Tanzania

119. Thailand
120. Timor-Leste
121. Tunisia
122. Turkey
123. Turkmenistan
124. Uganda
125. Ukraine
126. United Arab Emirates
127. United Kingdom
128. United States
129. Uruguay
130. Uzbekistan, Republic of
131. Venezuela
132. Vietnam
133. Zimbabwe

IGF

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The IGF supports more than 75 nations committed to leveraging mining for sustainable development to ensure negative impacts are limited and financial benefits are shared. It is devoted to optimizing the benefits of mining to achieve poverty reduction, inclusive growth, social development, and environmental stewardship. The International Institute for Sustainable Development has served as Secretariat for the IGF since October 2015. Core funding is provided by the governments of Canada and the Netherlands.

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