Billion-dollar exposure: Investor-state dispute settlement in Mozambique's fossil fuel sector

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Key takeaways

◆ Mozambique is endowed with extensive untapped natural resources, particularly gas and coal. The country's gamble on fossil fuel-based economic growth comes with significant economic risks and crowds out investments in the country's enormous renewable energy potential.

◆ Mozambique faces a substantial economic risk due to its exposure to investor-state dispute settlement (ISDS) claims by foreign investors in its coal, oil, and gas sectors. The investment protections in the country's international investment agreements and contracts, combined with ISDS, expose Mozambique to multi-billion-dollar financial liabilities. Even conservative estimations show that potential ISDS liabilities from oil and gas projects would cover almost a decade of Mozambique's government expenditures for SDGs.

◆ Mozambique's international investment agreements and publicly available oil, gas, and coal contracts allow foreign investors to bypass the national judicial system and bring multi-billion-dollar ISDS claims against Mozambique. Such claims can result in significant costs for the country, and they also have a considerable chilling effect on any new public-interest regulation in areas such as health, environment, community rights or labor protections. ISDS can undermine attempts to adopt meaningful legislation to transition away from fossil fuels and achieve sustainable development goals. This regime can therefore contribute to locking the country into a high-carbon economy.

◆ In addition, multiple stabilization clauses in the analyzed contracts lock the operations into specific legal and fiscal regimes for the duration of the contracts. Stabilization clauses protect investments from unexpected regulatory changes or new fiscal rules. If a host state does introduce such changes, stabilization clauses allow investors to demand measures or compensation that would ensure their same profitability absent such changes. These clauses thus exacerbate the limits to – and chilling effect on – states' public interest regulation.

◆ Mozambique and other countries can take actions to remove ISDS from their contracts and treaties, replacing the mechanism with alternative dispute resolution mechanisms. They can also take steps to terminate investment agreements in force. Home countries of Mozambique's foreign investors have a responsibility to support such action, especially as they, themselves, remove ISDS from their own treaties.

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1 Introduction

Mozambique is home to abundant natural resources, including coal, gas, titanium, and other minerals. Its abundant and untapped gas reserves, estimated at around 100 trillion cubic feet, rank it among the world's top gas reservoirs and the third largest in Africa.[1] Mozambique is also estimated to have substantial coal reserves, around 1,975 million tons, ranking it 26th in the world.[2]

Decades of mining and resource extraction, however, have not translated into sustained economic growth.[3] In 2023, Mozambique was ranked among the ten countries with the lowest Human Development Index.[4] With very limited economic diversification, Mozambique's economy remains particularly entangled with and dependent on its extractive industry and official development aid.[5]

Mozambique's extractive industry has also been embroiled in human rights abuses. For instance, an ongoing civil war has unfolded in Cabo Delgado since 2017 in connection with its gas megaproject, which is one of the biggest gas extraction projects in Africa.[6] The ongoing conflict has already resulted in extreme violence and the displacement of 670,000 people.[7] In Tete province, local communities residing in close proximity to coal mines have reported a range of issues, including forced displacement, land grabbing, inadequate compensation, and adverse health effects due to environmental pollution.[8]

The exploitation of Mozambique's coal, oil, and gas reserves is also incompatible with global climate change goals. Recent research identifies 425 oil, gas, or coal projects as "carbon bombs" worldwide.[9] Each of these projects presents a CO_2 emissions potential that exceeds 1 Gigaton;[10] six of these carbon bombs are in Mozambique.[11] Potential emissions from these six projects alone are expected to be 11.8 gigatons of CO_2 ($GtCO_2$), making Mozambique the 19th country in the ranking of carbon bombs. In comparison, the European Union's total emissions in 2022 was 2.96 $GtCO_2e$[12] In other words, cumulative emissions resulting from these six projects are equivalent to the emissions of twenty-seven countries for four years, including some of the biggest polluters, such as Germany.[13]

Exploiting these resources would considerably jeopardize the achievement of global climate change goals,[14] posing grave risks to Mozambique, given its vulnerability to climate change impacts.[15]

Like other fossil fuel–exporting developing countries, Mozambique faces profound economic risks by delaying its transition away from fossil fuel extraction and export.[16] First, in the long term, such resources are unlikely to remain economically competitive. As global efforts intensify to mitigate climate change, fossil fuel reserves are poised to become stranded resources. This situation will impact the profitability of existing and new fossil fuel projects worldwide, and therefore, also in Mozambique.[17] Moreover, the country's economy is not diversified: it is exceptionally entangled with and highly dependent on its extractive sector, which, in turn, is subject to highly volatile markets.[18] Much endemic features, coupled with the stranding of these assets, considerably lower the profitability of these projects and make it challenging to realize effective and inclusive growth.

Second, developing coal, oil, and gas projects locks Mozambique into a high-carbon economy and infrastructure, delaying the transition to sustainable and low-carbon alternatives.[19] Mozambique is richly endowed with renewable energy resources that are scarcely exploited.[20] For a country like Mozambique, renewable energy (RE) could help sustainably improve access to energy, especially in rural areas (SDG 7), and also respond to the climate change challenge (SDG 13).[21] However, the current focus on fossil fuel resources is locking Mozambique into inefficient megaprojects that are not achieving these objectives.

" Globally, as of 2023, coal, oil, and gas investors have initiated 20% of all known contract- and treaty-based ISDS cases; these claims have already granted them at least USD 82.8 billion. Of the cases where the arbitral tribunal reached a decision, the award was in favor of the investor in over 75% of the cases. "

An opaque but formidable obstacle to Mozambique's ability to navigate the global energy transition and mitigate risks is its commitments to protect investors in the fossil fuel sector through contracts that govern specific projects and through investment treaties with investors' home countries. These contracts and treaties include a number of extraordinary legal protections for investors that are directly enforceable against the state through the investor-state dispute settlement (ISDS) mechanism. Increasingly, fossil fuel companies and investors are using this mechanism to lock in the profitability of their investments in the context of the energy transition, challenging measures that states are taking to transition away from fossil fuel extraction and use.[22]

Fossil fuel investors have relied extensively on ISDS since its inception. Globally, as of 2023, coal, oil, and gas investors have initiated 20% of all known contract- and treaty-based ISDS cases; these claims have already granted them at least USD 82.8 billion.[23] Of the cases where the arbitral tribunal reached a decision, the award was in favor of the investor in over 75% of the cases.[24]

Tienhaara et al. estimate that global climate action could generate upward of USD 340 billion in new ISDS claims globally from oil and gas investors and that Mozambique is one of the most exposed countries.[25] In another study, they calculate that "the total mean [net present value] of all [Mozambique's] treaty-protected oil/gas assets ($29 billion) is nearly twice the size of its GDP in 2019 ($15 billion)."[26] Both studies only consider yet-to-be-developed projects in upstream oil and gas (e.g., excluding coal and midstream/downstream infrastructure) and do not account for the ISDS exposure with projects under exploration or development,[27] so the actual potential liabilities for host states in general, and Mozambique in particular, are much higher. TotalEnergies' final investment decision for the LNG megaproject in Cabo Delgado alone stands at USD 20 billion.[28]

Mozambique's 2023 public budget allocates a total amount of MZN 200 trillion - equivalent to approximately USD 3.1 billion—to government expenditures geared toward achieving Sustainable Development Goals (SDG) 1 (eradicating poverty), 3 (good health and well-being), and 4 (quality education) in 2023. These three items constitute half of the 2023 public budget.[29] Assuming these amounts remained constant in budgets over the next decade, even Tienhaara et al.'s underestimated figure of USD 29 billion in potential ISDS liabilities from oil and gas projects would cover almost a decade of Mozambique's government expenditures for SDGs 1, 3, and 4, or approximately half a decade of total public expenditures. Therefore, potential ISDS liabilities from oil and gas projects could divert a substantial amount of Mozambique's public resources away from high-priority areas such as poverty eradication, education, and healthcare at a crucial time for achieving the 2030 Agenda.

This paper describes the risks Mozambique faces in terms of potential ISDS claims linked to fossil fuel projects in its territory under the country's investment treaties and publicly available contracts. The analysis is based on Mozambique's applicable international investment agreements (IIAs)[30] and 22 of Mozambique's publicly available contracts for oil, coal, and gas projects.[31]

2 Mozambique's Exposure to Treaty-Based ISDS

Mozambique is a party to 25 IIAs in force.[34] Investment treaties afford foreign investors special protections that are enforceable directly against the 'host' state, allowing them to claim damages for alleged breaches of the investor protections.[35] These usually include protections against direct and indirect expropriation,[36] as well as standards such as fair and equitable treatment (FET),[37] national treatment,[38] most-favored-nation treatment (MFN),[39] and full protection and security. All of Mozambique's BITs in force provide for these types of protections.[40]

At first glance, only a very few investors seem to have access to treaty protection. As presented in Appendix 1, it appears that investors in only four contracts would be covered by the applicable BIT, based on the nationality of the contracting party as expressed in the contract.[41] Most of the concessionaires in these contracts have been constituted under the laws of Mozambique. In this context, it is important to note that there might be advantages or requirements for an investor to establish a company in the host state. For example, regarding oil and gas activities, article 26 of the Petroleum Law 21/2015 requires a company to be registered in Mozambique to sign an EPCC and conduct petroleum.

However, this is illusory for a series of reasons. IIAs Protected investors can include not only the contracting entities but also subsidiaries and shareholders based in countries with which Mozambique has a treaty. A previous analysis that takes into account the nationality of the investors' headquarters reveals that almost all fossil fuel megaprojects are covered by one or more IIA with ISDS provisions.[42] Investors often "treaty shop" and bring cases through entities that are able to directly take advantage of the most favorable IIA,[43] so Mozambique's exposure to IIA risk is as vast as the network of shareholders and subsidiaries of its investors. To facilitate the ability of shareholders and other stakeholders in the investments to bring claims under existing IIAs, many of the contracts (11 out of the 20 analyzed contracts in this analysis) include additional language to specify the nationality of the investor or of the investment for purposes of treaty protection and dispute settlement provisions.[44] Mozambique's investment treaty with Mauritius also contains an "umbrella clause" such that any breach of the investor's contractual rights by the host state can be considered a violation of the treaty.[45] Even if there is great diversity in the interpretation of umbrella clauses by investment tribunals, such provisions can have a powerful chilling effect by allowing investors to build claims combining treaty and contractual obligations.[46]

3 Mozambique's Exposure to Contract-Based ISDS

In addition to ISDS exposure under IIAs, Mozambique is highly exposed to ISDS risk in its contracts because of the combination of its contracts' dispute settlement provisions, stabilization clauses, and other treaty-like investor protection provisions.

As of November 2023, Mozambique concluded six licensing rounds of oil and gas exploration. In its sixth round, it granted 16 licenses for oil and gas exploration, and in its previous round, in 2015, the government awarded 15 licenses.[47] The Mozambique mining cadastre shows a myriad of mining concessions and exploration areas, with a large number of active coal mining concessions.[48] Only 20 coal, oil, and gas contracts in force are publicly available, constituting only a small sample of Mozambique's fossil fuel investment contracts.[49]

This analysis is based on these 20 contracts[50] and 2 model exploration and production concession contracts (EPCC) adopted by Mozambique in 2006 and 2016 (see list in Appendix 1). Twelve contracts are concession contracts for the exploration and subsequent production of hydrocarbons (oil and gas), either onshore or offshore; one is an infrastructure contract for the construction of a pipeline; and seven are mining contracts for coal extraction.

ISDS Clauses

Every contract analyzed contains an ISDS provision allowing the investor to bring claims alleging harm suffered because of measures adopted by Mozambique that breach its contractual obligations.

Eighteen contracts[51] and the two model contracts, provide that if negotiations do not resolve disputes, either party may resort to ISDS as the sole method of adjudicating disputes involving the interpretation of law or the application of the contract.[52] These contracts allow investors to bypass the national judicial system, as in the case of investors and shareholders covered by IIAs, undermining the government's own ability to advance and improve the applicable legislation and procedural rules relating to these sectors.

Stabilization Clauses

The contracts' stabilization clauses can exacerbate the risks of treaty-based and contract-based dispute settlement provisions. Stabilization clauses protect investments from unexpected regulatory changes over the duration of the contract. They have received widespread attention because of their chilling effect on government regulation "designed to promote environmental, social, or human rights goals."[53]

The contracts under analysis include various forms of stabilization clauses (with substantially similar wording),[54] and thirteen of them and the 2006 EPCC model include multiple stabilization provisions in the same contract.[55]

The 2007 mining contract concluded with Vale's subsidiary[56] includes a full freezing stabilization clause. This type of clause stipulates that changes to the law are not applicable to the project.[57]

The terms of this contract are binding during the term of the project on the State, which undertakes not to change them unilaterally or to act in such a way as to affect the terms and conditions defined for the implementation and operation of the project.
[TRANSLATED FROM PORTUGUESE][58]

This freezing stabilization clause is the most traditional form of stabilization and is "regarded as contractually prohibiting the host state from enacting legislation that

"This freezing stabilization clause is regarded as contractually prohibiting the host state from enacting legislation that modifies the investment contract."

modifies the investment contract. They are described as 'plac[ing] a guillotine on changes in the proper law.' By committing the state 'at the core of its legislative sovereignty,' they constitute 'an absolute block' on its legislative competence."[59]

A modestly less restrictive approach is the inclusion of economic equilibrium and allocation of burden clauses,[60] which provides that if any change in the law affects the economic interests of the concessionaire, the parties must agree on the necessary changes to be made to the contracts to restore the investor's original economic position. Most contracts (17), but none of the model contracts, include an economic equilibrium clause. These are worded exactly as – or substantially similar to – the following article from an EPCC with Eni:

In the event of changes in petroleum legislation or in any other Mozambican legislation that affect Petroleum Operations that may, individually or cumulatively, negatively affect the economic benefits of the Concessionaire or the State under this contract, the Parties will meet as soon as possible after the occurrence of any of the aforementioned situations with a view to ***verifying and agreeing on the necessary changes to this contract in order to restore, as close as possible, the economic benefits that would accrue to the concessionaire if the legislative change had not occurred.***
[EMPHASIS ADDED, TRANSLATED FROM PORTUGUESE][61]

The same article provides an exception for non-discriminatory measures adopted in the interest of safety, health, labor, or environmental preservation, so long as they are reasonable and in accordance with standards generally accepted in the international petroleum industry. The provision places the burden of proof on the state in any dispute surrounding this requirement.[62] In investor-state disputes, arbitrators are afforded wide latitude in determining whether a measure taken in the public interest is reasonable and non-discriminatory. The contracts also do not specify the "standards generally accepted in the international petroleum industry," which is an evolving and subjective standard.

The stabilization of fiscal terms can be found in both law and contract. Mozambique's Tax Law was amended in 2017 to grant fiscal stability to petroleum operations for ten years, extendible for the duration of the contract.[63] Several EPCCs signed after that date reference that legal provision explicitly.

Most of the contracts (15), and the two model EPCCs include fiscal stabilization provisions. There are two types of fiscal stabilization clauses, and the first generally hews close to the following:

In the event that, after the Effective Date, any other tax that is not of the type set out in Article 11 is introduced ***in the Republic of Mozambique, and, as a result,*** *there is an adverse effect of a material nature on the economic value derived from the Petroleum Operations by the concessionaire,* ***the Parties will, as soon as possible thereafter,*** *meet to agree on changes to this EPCC which will ensure that the concessionaire obtains* ***from the Petroleum Operations, following such changes,*** *the same economic benefits as it would have obtained if the change in the law had not been effected. [Emphasis added, translated from Portuguese][64]*

The second type of fiscal stabilization is found in eight Contracts - the early EPCCs concluded between 2005 and 2010 - and the 2006 EPCC model contract. These clauses typically read along the lines of the following:

If there ***is a breach of*** *the warranty set out in* ***Article 11.6 [fiscal guarantees]***[65] *or in the event that after the Effective Date there is* ***a change in the laws of the Republic of Mozambique of the kind referred to in Article 11 [fiscal stabilization]*** *and as a result,* ***the Parties meet to agree on changes*** *to be made to this EPC[C], then during the period starting when the change in the law comes into effect and ending when an agreement between the Parties is reached pursuant to Article 11,* ***the portion of Profit Petroleum to which the Concessionaire and the Government would otherwise be entitled shall be adjusted so that the net*** *revenues to be received by the Concessionaire from Petroleum Operations are the same as they would have been if no change in the law had taken place. [Emphasis added][66]*

These fiscal stabilization provisions function similarly to an economic equilibrium clause, whereby the state must ensure the concessionaire continues to experience the same fiscal advantages throughout the contract's duration.

The OECD Guiding Principles for Durable Extractive Contracts[67] notes that "where governments decide they are necessary, fiscal stabilization provisions can be designed to minimize 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."[68] The fiscal stabilization clauses embedded in Mozambique's analyzed contracts do not reflect those recommendations: they are not limited to specific key fiscal terms, and they endure for long periods of time.

Stabilization clauses may hinder the implementation or application of crucial social, environmental, and economic policies and laws on large extractive projects. Projects may be exempt from or require compensation for complying with more robust laws and regulations in areas such as community engagement, labor relations, safety, environmental impact, or climate action. Fiscal stabilization clauses can prevent states from adopting climate-oriented fiscal measures such as carbon taxes.[69]

Stabilization clauses can also bolster claims made by foreign investors based on treaty provisions. Stabilization clauses and broadly-worded investor protections can both be used to undermine or challenge legislative measures, executive actions (regulations), judicial decisions, host state policies, and even the host state's participation in new international treaties.[70]

" Investors have claimed breaches of indirect expropriation when a host government measure or series of measures allegedly interfere with their investment even without a direct taking of that investment. "

Treaty-like Clauses

Some of the key protections typically offered to foreign investors in IIAs have also been included in the analyzed contracts. For instance, all of the EPCCs concluded before 2016 and five mining contracts provide explicit protection against indirect expropriation. Investors have claimed breaches of indirect expropriation when a host government measure or series of measures allegedly interfere with their investment even without a direct taking of that investment. Investors have successfully challenged a range of regulatory measures as tantamount to expropriation, further eroding host states' policy space.[71]

Lastly, five of the analyzed mining contracts include a most-favored-nation (MFN) clause, which entitles foreign investors to receive treatment no less favorable than that granted to investors from any other foreign country. This mechanism has been interpreted to allow investors to import favorable provisions from IIAs between the host state and third countries, thereby enhancing investors' protections.[72] This clause may facilitate "treaty shopping," where investors exploit advantageous provisions from unrelated treaties, increasing Mozambique's exposure beyond its negotiated agreements.[73]

4 Conclusion and Recommendations

The far-reaching and broad protections afforded to foreign investors under Mozambique's IIAs and fossil fuel contracts, combined with access to ISDS, is likely to paralyze—possibly beyond mid-century—any attempt to adopt meaningful legislation to transition away from fossil fuels and achieve sustainable development goals. All of the analyzed contracts were signed between 2000 and 2019 and contemplate, on average, an extractive period of 25 to 30 years. Some of the contracts explicitly provide for the possibility of extension in time or area. For example, a coal concession signed in 2014 with Midwest Africa has a duration of 25 years and foresees the possibility of continuing the extraction for a second period of 25 years.[74] In other words, Mozambique could still be extracting coal under the terms of that contract in 2064.

Several actions are available to Mozambique and its partner countries to address the issues identified in this paper.[75]

First, Mozambique—unilaterally or by consent with its partner states—can terminate IIAs in force and agree to neutralize sunset clauses.[76] Termination of IIAs would help Mozambique address the excessive costs and risks associated with the current regime. While unilateral termination of IIAs is possible and has been done by several states,[77] termination by consent is preferable. Unilaterally terminating an IIA that includes a sunset clause exposes Mozambique to ISDS claims for a number of years after its unilateral termination, whereas mutual termination with a neutralized sunset clause would immediately extinguishing the investment obligations of the state parties toward covered investors. [78]

Mozambique and its treaty partners could alternatively amend their agreements to remove ISDS provisions. Amending IIAs in this manner reflects a state's sovereign right to adapt its obligations and commitments while seeking to strike a balance between protecting foreign investments and protecting its own regulatory autonomy.[79] Because an amendment requires an agreement between the parties to the IIA, states cannot do this unilaterally. In the case of amending an IIA to remove the ISDS provision, states may choose to replace that provision with an alternative mechanism, such as state-to-state dispute settlement or reliance on domestic legal systems only to resolve investment disputes.[80] Guidance can be drawn from Mozambique's experience in the renegotiation of the SADC protocol on investment, leading to the removal of the ISDS clause and the rebalancing of investment protections and securing regulatory space for the host states.[81]

Lastly, Mozambique should also assess its exposure to ISDS under contracts and consider renegotiating them. Here, one of the foremost challenges is the threat of legal disputes and the potential for ISDS claims that could discourage Mozambique from pursuing renegotiations. To address these challenges, Mozambique should seek to build legal and financial expertise to renegotiate its fossil fuel contracts on a basis of fairness and equity, bringing them in line with the climate change and energy transition imperatives and preventing the devastating long-term developmental consequences of a carbon lock-in.[82] More broadly, the government should carefully weigh the risks of further entrenching ISDS liabilities resulting from new fossil fuel licensing rounds and contracts against the overwhelming long-term advantages of reducing fossil fuel dependence and leapfrogging to low-carbon development based on renewable energy systems.

Home countries of Mozambique's foreign investors have a responsibility to support both the termination of IIAs and the renegotiation of contracts, in line with both their climate and broader sustainable development and rule of law commitments.[83] Indeed, such support would align with the steps that many countries in the European Union and the United States have already taken to limit their own exposure to ISDS.[84]

References

Bos K and Gupta J, 'Climate Change: The Risks of Stranded Fossil Fuel Assets and Resources to the Developing World' (2018) 39 Third World Quarterly 436

Cameron P. D., 'Stabilization in Investment Contracts and Changes of Rules in Host Countries: Tools for Oil and Gas Investors',(2006), available at https://www.international-arbitration-attorney.com/wp-content/uploads/arbitrationlaw4-Stabilisation-Paper.pdf (accessed on Sep 14, 2023).

Cançado Trindade A. A., The Application of the Rule of Exhaustion of Local Remedies in International Law: Its Rationale in the International Protection of Individual Rights (Cambridge University Press, 1983), citing 1 Interhandel (Switz. v. U.S.), Preliminary Objections, 1959 I.C.J. Rep. 6, 27 (Mar. 21), available at http://www.icj-cij.org/docket/files/34/2299.pdf (accessed on Sep 14, 2023).

Cotula L., 'Reconsidering Sovereignty, Ownership and Consent in Natural Resource Contracts: From Concepts to Practice' (2019) 9 European Yearbook of International Economic Law 143, 160.

Brauch M. D., Toledano P and Aceveda C, 'Allocation of Climate-Related Risks in Investor–State Mining Contracts' (2022) Columbia Center on Sustainable Investment (CCSI), available at: https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=1223&context=sustainable_investment_staffpubs (accessed on Sep 14, 2023).

Brauch M. D., 'Best Practices in Exhaustion of Local Remedies in International Investment Law' (2017) International Institute for Sustainable Development (IISD), available at https://www.iisd.org/system/files/publications/best-practices-exhaustion-local-remedies-law-investment-en.pdf (accessed on Sep 14, 2023).

Di Salvatore L., 'Energy Transition and Investment Protection in the Global South: The Case of Mozambique' in Geoffrey Wood and others (eds), The Palgrave Handbook of Zero Carbon Energy Systems and Energy Transitions. Palgrave Studies in Energy Transitions (Palgrave Macmillan, London 2022), 23.

Di Salvatore L., 'Investor–State Disputes in the Fossil Fuel Industry' (International Institute for Sustainable Development 2021), available at: https://www.iisd.org/publications/report/investor-state-disputes-fossil-fuel-industry (accessed on Sep 14, 2023), 8

Energy Information Administration, 'Mozambique Overview' (Energy Information Administration, accessed on Sep 14, 2023) https://www.eia.gov/international/overview/country/MOZ.

Erickson P., Kartha S., Lazarus M., Tempest K., 'Assessing Carbon Lock-In' (2015) 10 Environmental Research Letters 84023.

Fisch-Romito V., Guivarch C., Creutzig F., Minx J. C., Callaghan M. W., 'Systematic Map of the Literature on Carbon Lock-in Induced by Long-Lived Capital' (2021) 16 Environmental Research Letters 053004, available at: https://iopscience.iop.org/article/10.1088/1748-9326/aba660 (accessed on Sep 14, 2023)

Gehne K. and Brillo R., 'Stabilization Clauses in International Investment Law: Beyond Balancing and Fair and Equitable Treatment' (2014), Working paper n. 2013/46; Gregory Moon, 'Arrested Ambition? Foreign Investor Protections, Stabilization Clauses and Fossil-Fuelled Power Generation in Developing Countries' (2021) 30 Review of European, Comparative and International Environmental Law 313.

Gjuzi J., Stabilization Clauses in International Investment Law : A Sustainable Development Approach (Springer 2018).

Gaukrodger D., 'Investment Treaties and Shareholder Claims: Analysis of Treaty Practice' (2014) OECD Working Papers on International Investment, 2014/03

Hirsch M., 'Between Fair and Equitable Treatment and Stabilization Clause: Stable Legal Environment and Regulatory Change in International Investment Law' (2019) 12 Journal of World Investment and Trade 783, 786.

INP Mozambique, 'M5RND Application Guide' (INP Mozambique, 2014), available at http://www.inp-mz.com/core/uploads/M5RND-AppGuide-V5.pdf (accessed on Sep 14, 2023).

International Energy Agency, 'Africa Energy Outlook 2022' (World Energy Outlook Special Report, Revised version, May 2023), available at https://iea.blob.core.windows.net/assets/220b2862-33a6-47bd-81e9-00e586f4d384/AfricaEnergyOutlook2022.pdf

irshner J., 'A Luta Continua: Contending High and Low Carbon Energy Transitions in Mozambique' in Mike Pasqualetti; Stefan Bouzarovski; Vanesa Castan Broto (ed), Routledge Energy Geographies Companion (Routledge 2017)

Kühne K., Bartsch N., Tate R. D., Higson J., Habet A., '"Carbon Bombs" - Mapping Key Fossil Fuel Projects' (2022) 166 Energy Policy

Kurek P., "Next Generation of Investment Treaties" Arbitration Blog, 21 July 2021, http://arbitrationblog.practicallaw.com/next-generation-of-investment-treaties/ (accessed on Sep 14, 2023).

Landfolio, 'Mozambique Landfolio Portal', available at https://portals.landfolio.com/mozambique/en/ (accessed on Sep 14, 2023).

Mapisse I., Cost of Fiscal Benefits Exceeded the Tax Contribution of Megaprojects by 72 billion meticais between 2010 and 2019: Review of Specific Tax Regimes and Tax Benefits for Petroleum and Mining Operations is Urgent' (Centro de Integridad Pública, February 2021), available at: https://clubofmozambique.com/wp-content/uploads/2021/02/Cost-of-Fiscal-Benefits.pdf (Accessed on Sep 14, 2023)

Merrill Ella, Jesse Coleman, Lisa Sachs, and Lise Johnson, 'International Investment Law and the Extractive Industries' (Columbia Center on Sustainable Investment, 2022), available at https://ccsi.columbia.edu/content/international-investment-law-and-extractive-industries (accessed on Sep 14, 2023)

Moon G., 'Arrested Ambition? Foreign Investor Protections, Stabilization Clauses and Fossil-Fuelled Power Generation in Developing Countries' (2021) 30 Review of European, Comparative and International Environmental Law 313.

OECD, Guiding Principles for Durable Extractive Contracts (OECD, 2020) available at: https://www.oecd.org/dev/Guiding-Principles-Durable-Extractive-Contracts-2020.pdf (Accessed on Sep 14, 2023).

Ostransky J., 'An Exercise in Equivocation: A Critique of Legitimate Expectations as a General Principle of Law under the Fair and Equitable Treatment Standard' in Andrea Gattini, Attila Tanzi and Filippo Fontanelli (eds), General Principles of Law and International Investment Arbitration (Brill Nijhoff 2018)

Porterfield M., 'Exhaustion of Local Remedies in Investor-State Dispute Settlement: An Idea Whose Time Has Come?'' (2015), available at https://www.law.georgetown.edu/wp-content/uploads/2017/09/Porterfield-Exhaustion-of-local-remedies-2015.pdf (accessed on Sep 14, 2023).

Riffel C., 'Indirect Expropriation and the Protection of Public Interests' (2022) 71 International and Comparative Law Quarterly 945.

Sattorova M, 'Denial of Justice Disguised? Investment Arbitration and the Protection of Foreign Investors from Judicial Misconduct' (2012) 61 International and Comparative Law Quarterly 223.

Shemberg A., 'Stabilization Clauses and Human Rights: A Research Project Conducted for IFC and the United Nations Special Representative to the Secretary General on Business and Human Rights' (2008), para 146, available at http://documents.worldbank.org/curated/en/502401468157193496/pdf/452340WP0Box331ation1Paper01PUBLIC1.pdf (accessed on Sep 14, 2023).

Sornarajah M., The International Law on Foreign Investment (Cambridge University Press, 2017) 258-259.

Strand J., "Supporting Carbon Tax Implementation in Developing Countries through Results-Based Payments for Emissions Reductions" (World Bank Group, 2020), Policy Research Working Paper 9443, available at: https://open-knowledge.worldbank.org/server/api/core/bitstreams/7039254e-54cf-56f0-9cd3-eb7218ef44fb/content (accessed on Sep 14, 2023).

Teeffelen J., Sinoia D., East S., Langa N., 'How Mozambique's enable tax avoidance' (March 2023), available at: https://www.somo.nl/how-mozambiques-tax-treaties-enable-tax-avoidance/, (accessed on Sep 14, 2023)

Tienhaara K, 'Regulatory Chill in a Warming World: The Threat to Climate Policy Posed by Investor-State Dispute Settlement' (2018) 7 Transnational Environmental Law 229

Tienhaara K and Cotula L, 'Raising the Cost of Climate Action?' (IIED ed, IIED 2020)

Tienhaara K., Thrasher R., Simmons B. A., Gallagher K. P., 'Investor-State Dispute Settlement: Obstructing a Just Energy Transition' [2022] Climate Policy 1, 11-12

Tienhaara K., Thrasher R., Simmons B. A., Gallagher K. P., 'Investor-State Disputes Threaten the Global Green Energy Transition' (2022) 376 Science 701

West J and Lépiz D. Q., 'Too Late to Count: a financial analysis of Mozambique's gas sector', (OpenOil, January 2021)

WTW, Understanding the impact of a low carbon transition on Colombia (WTW, 2023) available at https://www.wtwco.com/en-gb/form-thank-you/2023/08/esg-crh-gbl-gbl-wgc-20230803-understanding-the-impact-of-a-low-pg13704a1-02-lp-gated-submit (accessed on Sep 14, 2023)

APPENDIX 1. Table listing the fossil fuel investment contracts under analysis.

Table 1 includes the following contracts:

a] 1 production sharing agreement (PSA) (2000);

b] 1 infrastructure construction contract - the pipeline contract (2000);

c] 6 first-generation exploration and production concession contracts (EPCC), similar in structure and wording to the 2006 EPCC model contract. (2005-2010) Some of these contracts have additional agreements, which have been added here under the original contracts;

d] 7 mining contracts (2007-2015);

e] 5 second-generation EPCCs, similar in structure and wording to the 2016 EPCC model (2018); and

f] 2 EPCC model contracts (2006 & 2016).

Contract name	Year	Type of contract	Fuel	Nationality (according to contract)	Applicable IIA	Arb. Rules	Stabilization clauses: Economic equilibrium	Stabilization clauses: Pet.-profit sharing ratio	Stabilization clauses: Pet. Law	Stabilization clauses: Fiscal
Contrato de Partilha de Produçãao para os Blocos de Pande e Temane	2000	PSA	Oil / Gas	Mozambique		CCI	X	X	X	X
Contrato de Gasoduto	2000	Pipeline	Oil / Gas	Mozambique		CCI				X
Contrato de Concessão para Pesquisa e Produção entre o Governo da República de Moçambique e Sasol Petroleum Sofala, Limitada e Empresa Nacional de Hidrocarbonetos. E.P.para os Blocos 16 & 19	2005	EPCC	Oil / Gas	Mozambique		UNCITRAL		X	X	X
Contrato de Concessão para Pesquisa e Produção entre o Governo da República de Moçambique e Anadarko Mozambique Area 1 Limitada e Empresa Nacional de Hidrocarbonetos,para Area 1 "Offshore" do Bloco do Rovuma	2006	EPCC	Oil / Gas	Mozambique		ICSID	X	X	X	X
Adenda ao Contrato de Concessão para Pesquisa e Produção da Area 1 "offshore" do Bloco do Rovuma	2017	Additional	Oil / Gas	Mozambique UK British Virgin Islands Netherlands Cyprus India	Mozambique - UK BIT (2004) Mozambique - Netherlands BIT (2001) India - Mozambique BIT (2009)	CCI				
Contrato de Concessão para Pesquisa e Produção entre o Governo da República de Moçambique e Eni East Africa S.P.A. e Empresa Nacional de Hidrocarbonetos, E.P.para Area 4 Offshore do Bloco de Rovuma	2006	EPCC	Oil / Gas	Mauritius	Mauritius-Mozambique BIT (1997)	ICSID	X	X	X	X
Acordo Complementar [ao Contrato de Concessão de Pesquisa e Produçao da Area 4, datado de 20 de Dezembro de 2006]	2017	Additional	Oil / Gas							
2° Acordo Complementar ao Contrato de Concessão de Pesquisa e Produçao para a Area 4 Offshore do Bloco do Rovuma Datado de 9 de Agosto de 2019 Entre o Governo da República de Moçambique e Mozambique Rovuma Venture S.P.A. Kg Mozambique Ltd Galp Energia Rovuma B.V. Empresa Nacional de Hidrocarbonetos, E.P	2019	Additional	Oil / Gas							
Contrato de Concessão para Pesquisa e Produção entre o Governo da República de Moçambique e Artumas Moçambique PetróleosPetroleos, Limitada e Empresa Nacional de Hidrocarbonetos. E.P. dara Area "Onshore" do Bloco do Rovuma	2007	EPCC	Oil / Gas	Italy	Italy - Mozambique BIT (1998)	ICSID	X	X	X	X
Contrato de Concessão para Pesquisa e Produção entre o Governo da República de Moçambique e PC Mozambique (Rovuma Basin) LTD e Empresa Nacional de Hidrocarbonetos. E.P.para as Areas "Offshore" 3 & 6 da Bacia de Rovuma República de Moçambique	2008	EPCC	Oil / Gas	Mozambique		ICSID	X	X	X	X
Contrato de Concessão para Pesquisa e Produção entre o Governo da República de Moçambique e Sasol Petroleum Moçambique Exploration Limitada e Empresa Nacional de Hidrocarbonetos. Empresa Pública para Area "A" Onshore	2010	EPCC	Oil / Gas	Mozambique		UNCITRAL	X	X	X	X
Contrato Mineiro Relativo a Concessão Mineira da Mina de Carvão de Moatize entre o Governo da República de Moçambique e Rio Doce Moçambique, Limitada	2007	Mining contract	Coal	Mozambique		ICSID				X
Contrato Mineiro Entre o Governo da República de Moçambique e Riversdale Moçambique Limitada	2009	Mining contract	Coal	Mozambique		ICSID/ UNCITRAL	X			X
Contrato Mineiro Entre o Estado Representado pelo Ministério Dos Recursos Minerais e Minas Moatize, Lda.	2013	Mining contract	Coal	Mozambique		ICSID	X			
Contrato Mineiro Entre a República de Moçambique e Midwest Africa, Limitada para Exploração de Carvão no Distrito de Moatize, Província de Tete	2013	Mining contract	Coal	Mozambique		ICSID	X			
Contrato Mineiro entre o Governo da República de Moçambique e Sol Mineração Moçambique, SA	2014	Mining contract	Coal	Mozambique		ICSID	X			
Contrato Mineiro entre o Governo da República de Moçambique e ENRC Moçambique, LDA	2014	Mining contract	Coal	Mozambique		ICSID	X			
Contrato Mineiro entre o Governo da República de Moçambique e Eta Star Moçambique, S.A	2015	Mining contract	Coal	Mozambique		ICSID	X			
Petroleum Exploration and Production Concession Contract between the Government of Mozambique nd Sasol Petroleum Mozambique Exploration Limitada And Empresa Nacional de Hidrocarbonetos E.P. for EPCC Area PT5-C	2018	EPCC	Oil / Gas	South Africa		UNCITRAL	X			X
Contrato de Concessão de Pesquisa e Produção de Petróleo [entre: o Governo da República de Moçambique e Exxonmobil Moçambique Exploration and Production, Limitada, e RN Zambezi South PTE. LTD., e Empresa Nacional ee Hidrocarbonetos, E.P. para a Área Z5-C]	2018	EPCC	Oil / Gas	Singapore Mozambique		UNCITRAL	X			X
Contrato de Concessão de Pesquisa e Produção de Petróleo [entre: o Governo da República de Moçambique e Exxonmobil Moçambique Exploration and Production, Limitada, e RN Zambezi South PTE. LTD., e Empresa Nacional ee Hidrocarbonetos, E.P. para a Área Z5-D]	2018	EPCC	Oil / Gas	Singapore Mozambique		UNCITRAL	X			X
Contrato de Concessão de Pesquisa e Produção de Petróleo entre o Governo da República de Moçambique e Eni Mozambico S.P.A. e Sasol Petroleum Mozambique Exploration Limitada e Empresa Nacional de Hidrocarbonetos, E.P. para Área do Contrato de Concessao A5-A	2018	EPCC	Oil / Gas	Italy Mozambique	Italy - Mozambique BIT (1998)	UNCITRAL	X			X
Contrato de Concessão de Pesquisa e Produção de Petróleo entre o Governo da República de Moçambique e Eni Mozambico S.P.A. e Exxonmobil Moçambique Exploration and Production, Limitada, e RN Angoche PTE. LTD., e Empresa Nacional ee Hidrocarbonetos, E.P. para a Área A5-B	2018	EPCC	Oil / Gas	Singapore Mozambique		UNCITRAL	X			X
EPCC model contract 2006	2006	EPCC	Oil / Gas			UNCITRAL		X	X	X
EPCC model contract 2016	2016	EPCC	Oil / Gas			UNCITRAL				X

End notes

1 Energy Information Administration, 'Mozambique Overview' (Energy Information Administration 2020), https://www.eia.gov/international/overview/country/MOZ.

2 Worldometer, 'Mozambique Coal' (Worldometer 2017), https://www.worldometers.info/coal/mozambique-coal/.

3 Alan R. Roe, 'Mozambique-Bust Before Boom: Reflections on Investment Surges and New Gas' (World Institute for Development Economic Research (UNU-WIDER) 2018) vol 2018/140, https://www.wider.unu.edu/publication/mozambique%E2%80%94bust-boom.

4 Max Roser, 'Human Development Index (HDI)' (Our World in Data 2019) https://ourworldindata.org/human-development-index#country-by-country-perspective-over-the-last-three-decades.

5 Mozambique is one of the 22 most aid-dependent countries in the world, according to the World Bank. See: Andersen JJ, Johannesen N and Rijkers B, 'Elite Capture of Foreign Aid: Evidence from Offshore Bank Accounts' [2020] World Bank Policy Research Working Paper No. 9150, http://journals.sagepub.com/doi/10.1177/10704965221134820.

6 Sabina Zawadzki, 'Anadarko Approves $20 Billion LNG Export Project in Mozambique' Reuters (London 19 June 2019) https://www.reuters.com/article/us-mozambique-anadarko-lng-idUSKCN1TJ2DI.

7 Christopher Giles and Peter Mwai, 'Mozambique Conflict: What's behind the Unrest?' British Broadcasting Corporation (London 29 March 2021) https://www.bbc.com/news/world-africa-56441499#.

8 Human Rights Watch, 'What is a House Without Food?: Mozambique's Coal Mining Boom and Resettlements' (Human Rihts Watch 2012) https://www.hrw.org/reports/mozambique0513_brochure_web.pdf.

9 Kjell Kühne, Nils Bartsch, Ryan Driskell Tate, Julia Higson, André Habet, '"Carbon Bombs" - Mapping Key Fossil Fuel Projects' (2022) 166 Energy Policy https://www.sciencedirect.com/science/article/pii/S0301421522001756.

10 Ibid., 5

11 The projects are: Zambezi Coal Mine (Coal, 4.1 GtCO2); Chirodzi Coal Mine (Coal, 2.9 GtCo2); Revuboe Coal Mine (Coal, 1.4 GtCO2); MZLNG Joint Development (T1-T2) (Oil&Gas, 1.3 GtCo2); Area-1 Future Phases (Oil&Gas, 1.0 GtCo2); Area 1 LNG (T1&T2) (Oil&Gas, 1.0 GtCo2). See Kjell Kühne et al., *supra* note 9, "Appendix 1 - List of Carbon Bombs."

12 Climate Watch, 'Global Historical Emissions' (Climate Watch 2023) https://www.climatewatchdata.org/ghg-emissions?breakBy=regions&end_year=2020&regions=WORLD%2CEUU&start_year=1990.; Ian Tiseo 'Carbon Dioxide Emissions in the European Union from 1965 to 2022' (Statista 13 September 2023) 12, https://www.statista.com/statistics/450017/co2-emissions-europe-eurasia/.

13 *Ibid*.

14 See the projections from the IPCC here: Intergovernmental Panel on Climate Change, 'Climate Change 2021: The Physical Science Basis' (Executive Summary, Cambridge University Press, 2021) https://www.ipcc.ch/report/ar6/wg1/; and the production projections here: Stockholm Environment Institute, United Nations Environment Programme, International Institute for Sustainable Development, Overseas Development Institute, & CICERO, 'The Production Gap Report 2022' (Stockholm Environment Institute, 2022) https://productiongap.org/.

15 Notre Dame Global Adaptation Initiative, 'Country Index' (University of Notre Dame 2023) https://gain.nd.edu/our-work/country-index/.

16 In the African context, see: Jeffrey D. Sachs, Perrine Toledano, and Martin Dietrich Brauch, with Tehtena Mebratu-Tsegaye, Efosa Uwaifo, and Bryan Michael Sherrill, 'Roadmap to Zero-Carbon Electrification of Africa by 2050: The Green Energy Transition and the Role of the Natural Resources Sector (Minerals, Fossil Fuels, and Land)' (Columbia Center on Sustainable Investment, New York, November 2022) https://ccsi.columbia.edu/sites/default/files/content/ccsi-roadmap-zero-carbon-electrification-africa.pdf. See also, for example, the analysis of the impacts of the low carbon transition on Colombia: WTW, 'Understanding the Impact of a Low Carbon Transition on Colombia' (WTW, 2023) https://www.wtwco.com/en-us/insights/2023/08/understanding-the-impact-of-a-low-carbon-transition-on-colombia.

17 Kyra Bos and Joyeeta Gupta, 'Climate Change: The Risks of Stranded Fossil Fuel Assets and Resources to the Developing World' (2018) 39 Third World Quarterly 436 https://www.tandfonline.com/doi/full/10.1080/01436597.2017.1387477.

18 Langa E, 'Dependência de Megaprojectos e Desindustrialização Prematura Em Moçambique' in Luís de Brito and others (eds), *Desafios para Moçambique* (IESE 2017)

19 Vivien Fisch-Romito et al., 'Systematic Map of the Literature on Carbon Lock-in Induced by Long-Lived Capital' (2021) 16 Environmental Research Letters 053004, https://iopscience.iop.org/article/10.1088/1748-9326/aba660. More broadly, Africa should swiftly phase out fossil fuels to avoid committing capital to coal, oil, and gas and risk excluding zero-carbon alternatives. See Jeffrey D. Sachs et al., "Roadmap to Zero-Carbon Electrification of Africa by 2050: The Green Energy Transition and the Role of the Natural Resources Sector (Minerals, Fossil Fuels, and Land). Commissioned by and prepared for the African Natural Resources Management and Investment Centre, African Development Bank (AfDB)" (CCSI, 2022) , 67, https://ccsi.columbia.edu/content/roadmap-zerocarbon-electrification-africa.

20 Luís Cristóvão, Fernando Chichango, Pedro Massinga, and Joaquim Macanguisse, 'The Potential of Renewable Energy in Mozambique: An Overview' (2021) 11(2) Journal of Energy Technologies and Policy, 30 https://www.researchgate.net/publication/351075767_The_Potential_of_Renewable_Energy_in_Mozambique_An_Overview. See also, for example, the recommendations made by the Dutch ministry of foreign affairs to Dutch investors looking to invest in Mozambique: Kees Mokveld and Steven von Eije, 'Final Energy Report Mozambique' (Netherlands Enterprise Agency, 30 July 2018) https://www.rvo.nl/sites/default/files/2019/01/Final-Energy-report-Mozambique.pdf.

21 *Ibid*.

22 Lea Di Salvatore, 'Investor–State Disputes in the Fossil Fuel Industry' (International Institute for Sustainable Development, 31 December 2021), 8 https://www.iisd.org/publications/report/investor-state-disputes-fossil-fuel-industry.

23 Lea Di Salvatore, Lorenzo Cotula, Anirudh Nanda and Chloe Yuqing Wang, 'Investor–State Dispute Settlements: A Hidden Handbrake on Climate Action' (International Institute for Environment and Development, London, 2023), https://www.iied.org/21971iied.

24 *Ibid*., 15

25 Kyla Tienhaara, Rachel Thrasher, B. Alexander Simmons, and Kevin P. Gallagher, 'Investor–State Disputes Threaten the Global Green Energy Transition' (2022) 376 Science 701 https://www.science.org/doi/10.1126/science.abo4637. The unpredictability of ISDS tribunals makes such estimates even harder to calculate. In the Tethyan Copper Company v. Islamic Republic of Pakistan case, the tribunal ordered Pakistan to pay over USD 5.9 billion to compensate the investor's expected profits for a project that had never been approved. *Tethyan Copper Company Pty Limited v. Islamic Republic of Pakistan* (2012) ICSID Case No. ARB/12/1; See also: Sofia De Murard, 'Tribunal Finds Pakistan Breached FET, Expropriation and Non-Impairment Obligations in the Context of a Mining Joint Venture with Australian Investor Tethyan Copper Company' *Investment Treaty News* (17 December 2019) https://www.ecosia.org/search?q=Tethyan%20copper%20IISD&addon=opensearch; Sarah Ahmad, 'The Role of Developing Countries in Investor-State Arbitration: Reflections on Tethyan Copper v Islamic Republic of Pakistan' (LSE Law Review Blog, 11 March 2023) https://blog.lselawreview.com/2023/03/role-developing-countries-investor-state-arbitration-reflections-tethyan-copper-v-islamic-republic-pakistan. Similarly, in early 2023, an ICSID tribunal ordered Italy to pay Rockhopper almost EUR 2000 million in compensation for an oil project that had not been developed. Rockhopper claimed that Italy's denial of a concession to exploit an oil field located in the Ombrina Mare amounted to a breach of the Energy Charter Treaty. *Rockhopper Exploration Plc, Rockhopper Italia S.p.A., and Rockhopper Mediterranean Ltd v Italian Republic,* ICSID Case No. ARB/17/14, Award (23 August 2022), 185.

26 Kyla Tienhaara, Rachel Thrasher, B. Alexander Simmons, and Kevin P. Gallagher, 'Investor-State Dispute Settlement: Obstructing a Just Energy Transition' (2022) Climate Policy 1, 11-12 https://www.researchgate.net/publication/366048921_Investor-state_dispute_settlement_obstructing_a_just_energy_transition.

27 Lea Di Salvatore, 'Energy Transition and Investment Protection in the Global South: The Case of Mozambique' (in Geoffrey Wood and others (eds), The Palgrave Handbook of Zero Carbon Energy Systems and Energy Transitions, Palgrave Macmillan, London, 2022) https://link.springer.com/10.1007/978-3-030-74380-2_26-1.

28 'A Project to Build a Worldclass LNG Facility in Mozambique' (TotalEnergies 2023) https://mzlng.totalenergies.co.mz/en.

29 República de Moçambique, 'Plano Económico e Social e Orçamento do Estado para 2023' (Mozambique, 14 October 2022), 59 https://mef.gov.mz/index.php/publicacoes/politicas/plano-economico-e-social-e-orcamento-do-estado-pesoe/pesoe-2023/1711-proposta-do-plano-economico-e-social-e-orcamento-do-estado-para-2023.

30 UNCTAD Investment Policy Hub, 'International Investment Agreements: Mozambique' (UNCTAD, 2023) https://investmentpolicy.unctad.org/international-investment-agreements/countries/143/mozambique.

31 These contracts include a) 1 production sharing agreement; b) 1 infrastructure construction contract - the pipeline contract; c) 11 exploration and production concession contracts (EPCC); d) 7 mining contracts; and e) 2 EPCC model contracts (2006 & 2016). Appendix 1 lists the contracts and the relevant provisions and/or applicable IIA. The contracts were gathered from ResourceContracts.org, 'An Online Repository of Petroleum and Mining Contracts' (ResourceContracts.org, 2023) https://www.resourcecontracts.org/contracts.

32 19 bilateral investment treaties and 6 multilateral treaties that include investment provisions. See *Supra,* note 38.

33 Columbia Center on Sustainable Investment, 'Primer on International Investment Treaties and Investor-State Dispute Settlement' (CCSI, New York, January 2022) https://ccsi.columbia.edu/content/primer-international-investment-treaties-and-investor-state-dispute-settlement.

34 Indirect expropriation refers to a situation where a government's actions or policies, while not directly seizing or nationalizing an investment, effectively deprive an investor of the economic value or benefits associated with their investment, to an extent that is equivalent to a direct expropriation. It involves a more subtle or gradual taking of property rights, often through regulatory measures, which can still trigger compensation requirements for the affected investor.

35 The Fair and Equitable treatment standard has the effect of extending protections beyond the mere letter of the law, encompassing a broader standard of treatment that encompasses the host country's regulatory and administrative actions, raising serious concerns for host countries. The broad and somewhat ambiguous nature of the FET standard can result in investor claims challenging a wide range of government actions, including policy changes and regulatory decisions that could negatively impact an investor's expectations. This can potentially limit a host country's ability to enact new laws or regulations that might be necessary for public welfare or economic development. See: Lise Johnson, 'Ripe for Refinement: The State's Role in Interpretation of FET, MFN, and Shareholder Rights' (CCSI & University of Oxford Global Economic Governance Programme, New York, April 2015) https://ccsi.columbia.edu/sites/default/files/content/docs/publications/GEG-WP_101-Ripe-for-Refinement-The-States-Role-in-Interpretation-of-FET-MFN-and-Shareholder-Rights-Lise-Johnson_0.pdf.

36 Foreign investors and their investments are to be treated no less favorably than domestic investors and their investments in similar circumstances. This principle aims to prevent discrimination against foreign investors based on their nationality.

37 Foreign investors should receive treatment that is at least as favorable as that given to investors from any other country. This provision encourages host countries to extend any preferential treatment granted to one foreign investor to all foreign investors.

38 Lea Di Salvatore, *supra* note 35.

39 The applicable BITs are: Mozambique - UK BIT (2004), Mozambique - Netherlands BIT (2001), Mauritius-Mozambique BIT (1997), and Italy - Mozambique BIT (1998)

40 Lea Di Salvatore, *supra* note 35.

41 Jones Day, a global law firm operating in ISDS, recommends that "given the likely significant impacts that the new mining laws will have on investments in Tanzania, every prudent investor should consider how international arbitration can protect existing investments against future state actions." See the August 2017 commentary, Javade Chaudhri and Melissa Stear Gorsline 'Tanzania Overhauls Mining Laws, Fines Investor US$190 Billion: Is Your Investment Protected?' (Jones Day, August 2017) https://www.jonesday.com/en/insights/2017/08/tanzania-overhauls-mining-laws-fines-investor-us190-billion-is-your-investment-protected#:~:text=Given%20the%20likely%20significant%20impacts,investments%20against%20future%20state%20actions.

42 For instance, three coal contracts define the relevant projects as "an investment for the purposes of article 2 of the Treaty between the Republic of Mozambique and the Republic of Mauritius for the Promotion and Reciprocal Protection of Investments," presumably in order to confirm treaty protection for Mauritius-based shareholders. '*Contrato Mineiro Entre O Governo Da República De Moçambique E Riversdale Moçambique Limitada'(2009)(*Mining contract with Riversdale, 2009*); 'Contrato Mineiro Entre A República De Moçambique E Midwest África Limitada Para A Exploração De Carvão No Distrito De Moatize, Província De Tete'(2013)(*Mining contract with Midwest Africa, 2013*); and 'Contrato Mineiro Entre O Estado Representado Pelo Ministério Dos Recursos Minerais E Minas Moatize, Lda.'(2013)(*Mining contract with Minas Moatize, 2013*).*

43 Practical Law, 'Umbrella Clause' (Thomson Reuters, 2023) https://uk.practicallaw.thomsonreuters.com/8-519-0939?transitionType=Default&contextData=(sc.Default)&firstPage=true#:~:text=An%20umbrella%20clause%20protects%20investments,%22umbrella%22%20of%20the%20BIT.

44 Katja Gehne and Romulo Brillo, 'Stabilization Clauses in International Investment Law: Beyond Balancing and Fair and Equitable Treatment' (2014), Working paper n. 2013/46 https://www.wti.org/media/filer_public/c7/83/c783ecf8-11cf-4e3c-88c4-6214f8f7b51e/stab_clauses_final_final.pdf; Gillian Moon, 'Arrested Ambition? Foreign Investor Protections, Stabilization Clauses and Fossil-Fuelled Power Generation in Developing Countries' (2021) 30 https://onlinelibrary.wiley.com/doi/full/10.1111/reel.12410; Harro van Asselt, 'Review of European, Comparative & International Environmental Law' (2018) 27(313) https://www.wiley.com/en-cn/Review+of+European%2C+-Comparative+%26+International+Environmental+Law-p-9780JRNL67182.

45 INP Mozambique, 'M5RND Application Guide' (INP Mozambique, 2014) http://www.inp-mz.com/core/uploads/M5RND-AppGuide-V5.pdf.

46 Landfolio, 'Mozambique Landfolio Portal', https://portals.landfolio.com/mozambique/en/.

47 There have been long existing concerns about the lack of transparency in contracting and the non-disclosure of contracts, which can lead to corruption and deals that do not benefit the public interest. Transparency is considered necessary for citizens to hold authorities accountable for managing collective resources, and there is support for the idea that investor-state contracts should have a different balance between transparency and confidentiality compared to purely commercial transactions. International guidance, national laws, and initiatives are promoting transparency and disclosure, with some progress being made in the extractive industry, but more limited progress in other sectors such as agribusiness. The public law dimensions of natural resource contracting and the responsibility of authorities to act in the interest of their people strengthen the case for transparency and accountability. See: Lorenzo Cotula, 'Reconsidering Sovereignty, Ownership and Consent in Natural Resource Contracts: From Concepts to Practice' (2019) 9 European Yearbook of International Economic Law 143, 160 https://www.iied.org/x00200. According to the Center for Public Integrity (CIP) in Mozambique, the country has made efforts to improve transparency in its extractive industries, but that challenges persist in fully complying with the Extractive Industries Transparency Initiative requirements. See: CIP, Moçambique continua com Transparência limitada nos contratos extractivos (CIP, 1st of May 2019) https://cipmoz.org/wp-content/uploads/2019/03/Contratos-extractivos.pdf.

48 Three additional agreements have been aggregated to their original contracts. (See Appendix 1.)

49 Except for two mining contracts, the Mining contract with Riversdale Moçambique, 2009, and the Mining contract with Eta Star, 2015

50 While most of the provisions indicate expert determination and arbitrations as the sole methods of determining a conflict, expert determination is only valid for non-legal matters, leaving arbitration as the only forum for legal interpretation.

51 Andrea Shemberg, 'Stabilization Clauses and Human Rights: A Research Project Conducted for IFC and the United Nations Special Representative to the Secretary General on Business and Human Rights' (2008), para 146 http://documents.worldbank.org/curated/en/502401468157193496/pdf/452340WP0Box331ation1Paper01PUBLIC1.pdf.

52 On the categories of stabilization clauses, see: *Ibid*.; and Jola Gjuzi, Stabilization Clauses in International Investment Law: A Sustainable Development Approach' (Springer 2018).

53 See Appendix 1.

54 *Contrato Mineiro Relativo a Concessão Mineira da Mina de Carvão de Moatize entre o Governo da República de Moçambique e Rio Doce Moçambique, Limitada* (2007)(Mining contract with Rio Doce, 2007)

55 Jola Gjuzi, *Stabilization Clauses in International Investment Law : A Sustainable Development Approach* (Springer 2018), 38

56 Mining contract with Rio Doce, 2007, art. 9.11.4.

57 Jola Gjuzi, *supra* note 63, 39

58 Jola Gjuzi, *supra* note 63, 38.

59 *'Contrato De Concessão Para Pesquisa E Produção Entre O Governo Da República De Moçambique E Eni East Africa S.P.A. E Empresa Nacional De Hidrocarbonetos, E.P. Para Área 4 Offshore Do Bloco De Rovuma República De Moçambique'* (2006)(EPCC with Eni East Africa, 2006), art. 27.14.

60 *Ibid.* 27.14. "The provisions of this article should not be read or interpreted as imposing any limitation or restriction on the scope or due and effective application of Mozambican legislation that does not discriminate, or has the effect of discriminating, the Concessionaire and that aims to protect health, safety , labor or environment or that regulates any category of property or activity conducted in Mozambique, provided, however, that the Government, at all times during the period of Petroleum Operations, ensures that, in accordance with the terms of article 31, measures taken to protect health, safety, labor or the environment are in accordance with reasonable standards generally accepted in the international petroleum industry."

61 República de Moçambique, Lei n. 14/2017, que altera o Regime Específico de Tributação e de Benefícios Fiscais das Operações Petrolíferas, aprovado pela Lei n.º 27/2014 28 December 2017.

62 EPCC with Eni East Africa (2006), art.11.9.

63 "11.6 The Government warrants that in respect of Petroleum Operations or income derived from Petroleum Operations, on the Effective Date there were no taxes, duties, levies, charges, fees or contributions other than the listed imposts and the taxes in respect of which the Concessionaire and its Subcontractors are exempt under Articles 11.2 and 11.3."

64 EPCC Model Contract (2006), art 9.12.c

65 OECD, Guiding Principles for Durable Extractive Contracts (OECD, 2020) https://www.oecd.org/dev/Guiding-Principles-Durable-Extractive-Contracts-2020.pdf.

66 *Ibid*., para. 54.

67 Martin Dietrich Brauch, Perrine Toledano and Cody Aceveda, 'Allocation of Climate-Related Risks in Investor–State Mining Contracts' (Columbia Center on Sustainable Investment (CCSI), June 2022) 8 https://ccsi.columbia.edu/sites/default/files/content/docs/ccsi-climate-change-risk-allocation-investor-state-mining-contracts.pdf. See also: Jon Strand, "Supporting Carbon Tax Implementation in Developing Countries through Results-Based Payments for Emissions Reductions" (World Bank Group, 2020), Policy Research Working Paper 9443 https://openknowledge.worldbank.org/server/api/core/bitstreams/7039254e-54cf-56f0-9cd3-eb7218ef44fb/content.

68 Gillian Moon, *supra* note 52.

69 Christian Riffel, 'Indirect Expropriation and the Protection of Public Interests' (2022) 71 International and Comparative Law Quarterly 945, 974 https://www.cambridge.org/core/journals/international-and-comparative-law-quarterly/article/indirect-expropriation-and-the-protection-of-public-interests/0F5DF8774E1551D454F37EAE5D85B80B. Riffle also notes that carefully drafted provisions in recent regional agreements restrict the scope of indirect expropriation, leaving more space to the state to regulate in the public interest. Yet, in this case, no further restriction nor definition of what indirect expropriation constitute is provided in the contracts.

70 Philipp Kurek, 'Next Generation of Investment Treaties' *Arbitration Blog* (21 July 2021) http://arbitrationblog.practicallaw.com/next-generation-of-investment-treaties/.

71 *Ibid.*

72 E.g., see Mining contract with Midwest Africa, 2013, Article 4.2 a) and b)

73 Lise Johnson, Lisa Sachs, Brooke Güven, and Jesse Coleman, 'Clearing the Path: Withdrawal of Consent and Termination as Next Steps for Reforming International Investment Law' (Columbia Center on Sustainable Investment, New York, April 2018) https://ccsi.columbia.edu/sites/default/files/content/docs/publications/IIA-CCSI-Policy-Paper-FINAL-April-2018.pdf; Daniel Rangel, Lori Wallach, Ladan Mehranvar, Alvaro Santos, and Mario Osorio, 'Turning the Tide: How to Harness the Americas Partnership for Economic Prosperity to Deliver an ISDS-Free Americas' (Columbia Center on Sustainable Investment, Rethink Trade, and Center for the Advancement of the Rule of Law in the Americas, Georgetown University Law Center, October 2023) https://ccsi.columbia.edu/sites/default/files/content/docs/CCSI-americas-partnership-economic-prosperity.pdf.

74 Sunset clauses typically stipulate that the treaty remains in force for a certain period after a country's termination of that treaty, providing protection to existing foreign investments for several years into the future. This delay leaves governments and stakeholders bound by outdated agreements and investor protections within these agreements.

75 Daniel Rangel et al. *supra* note 81

76 Daniel Rangel et al. *supra* note 81, 30.

77 More information on these processes can be found in a recently published report by Rethink Trade and the Columbia Center on Sustainable Investment. See: Daniel Rangel et al. *supra* note 81.

78 Lise Johnson, Jesse Coleman, Brooke Güven, and Lisa Sachs, 'Alternatives to Investor-State Dispute Settlement' Columbia Center on Sustainable Investment Working Paper 2019 https://ccsi.columbia.edu/sites/default/files/content/docs/our%20focus/extractive%20industries/Alternatives-to-ISDS-11-April-2019.pdf.

79 Ngobeni L and Fagbayibo B, 'Recent Developments in the Regulation of Investor-State Dispute Resolution: Any Lessons for the Southern African Development Community?' (2017) 10 African Journal of Legal Studies 180 https://brill.com/view/journals/ajls/10/2-3/article-p180_5.xml.

80 Raja Kaul and Antoine Heuty, 'Getting a Better Deal from the Extractive Sector' (Revenue Watch Institute, 2009) https://resourcegovernance.org/sites/default/files/RWI-Getting-a-Better-Deal-final0226.pdf.

81 Agreements protecting high carbon investment are inherently inconsistent with the Paris Agreement's objective of "Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development." (Art. 2.1(c))

82 The EU has adopted a multilateral instrument to terminate intra-EU BITs. See the "Agreement for the termination of Bilateral Investment Treaties between the Member States of the European Union," Official Journal of the European Union 169, no. 1 (May 2020), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22020A0529(01). And many EU countries have begun to withdraw from the Energy Charter Treaty (ECT). See the written notifications of withdrawal from the Energy Charter Treaty, available here: https://www.energycharter.org/media/news/article/written-notifications-of-withdrawal-from-the-energy-charter-treaty/. As of July 1, 2023, the ISDS mechanism between the United States and Canada has been terminated, under the United States-Mexico-Canada Agreement (USMCA). See Nathalie Bernasconi-Osterwalder, 'USMCA Curbs how Much Investors Can Sue Countries – Sort of' (IISD 2 October 2018) https://www.iisd.org/articles/usmca-investors.