

Oil and Gas Development: A Conundrum
Prosperity or the Resource Curse?
Way Forward: The Turtle Theory of Development

*“The foundation of all good solutions to problems is
discussion and debate”*

- Sam Nujoma, First President of Namibia

Bank of Namibia

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Radon is the founder and director of the Eesti and Eurasian Public Service Fellowship and associated programs, which provide students from Columbia, Stanford Law School and other institutions the opportunity to intern with public authorities and civil society in emerging nations across the globe.

Students have interned in Cambodia, Ecuador, Estonia, French Polynesia, Georgia, India, Mozambique, Namibia, Nepal, Philippines, Tanzania and Uganda. Radon is a past recipient of SIPA's "Top Five" teaching award; and his 2012 Capstone class won the "Dr. Susan Aurelia Gitelson Award for Human Values in International Affairs." His undergraduate teams have, since 2023, twice placed second in the competitive Schuman Challenge sponsored by the EU. Radon has also supervised Capstones examining the challenges of resource development in Colombia, French Polynesia, Mozambique, Namibia, Peru and Tanzania and Capstones analyzing the potential of small states, specifically Estonia, French Polynesia, Kosovo, Mauritius and Namibia.

Radon was awarded a Fulbright to Makerere University Law School in Uganda. He serves as a director/advisor of academic institutions and medical relief, wildlife preservation and other civil society groups, including Stevens Business School, Direct Relief, DD Foundation in Estonia, e-Governance Academy in Estonia, the Harriman Institute, and Soldiers for Wildlife. He serves as Chair of the Board of Trustees of the American University in Bulgaria; and he is an advisor to the Ambedkar International Mission and inspired the establishment of Universal Equality Day.

Radon is presently a visiting professor at Prishtina Law School in Kosova teaching in its inaugural program on human rights. He was a lecturer at Stanford University's law and business schools, where he taught access to medicine, international human rights, privatization and international investment management. He was a visiting professor at the Indira Gandhi Institute for Development Research in Mumbai, India, where he taught "Dynamics of Corruption," which explored the sociological, psychological and legal roots of corruption. Radon was the Ashton J. and Virginia Graham O'Donnell Visiting Educator at Whitman College. Radon has also taught at Tartu University Law School in Estonia; Monterrey Tech, Queretaro, and Instituto Mexicano del Petróleo, in Mexico; Externado University in Bogota, Colombia; and Makerere University in Uganda.

Radon participated in the constitutional peace process of Nepal and served as the key drafter of the interim/peace (2006) constitution, which, among other things, granted citizenship to millions of stateless people in the Terai region. He has served on the UN Global Compact Academic Initiative taskforce which sought to have business schools incorporate the Compact's 10 human rights principles into their curriculum.

In the early 1980s, Radon founded Radon Law Offices, a boutique international law firm representing international companies in corporate matters, and with respect to the extractive industry (energy and mining), only advising public authorities, including state owned enterprises. From 1999 to 2007, Radon was one of the executors/trustees of Vetter Pharma, a major privately-held pharmaceutical company in Germany, a world leader in the production of aseptic pre-filled syringes. He also serves on the boards and committees of international biotech and hi-tech venture capital funds.

Radon co-founded the Afghanistan Relief Committee in 1980 that sought freedom for Afghanistan and supported refugees displaced during the Afghan-Soviet war. Radon served as an advisor during Estonia's

independence struggle and, after the restoration of its independence, co-authored the country's foreign investment, mortgage/pledge, and company laws and was one of the architects of Estonia's privatization. Radon is proud that he was the first to officially raise the U.S. flag in Soviet-occupied Estonia since the 1940 Soviet invasion when he, with the support of Estonians, reclaimed the former US Embassy. He was awarded the Medal of Distinction of the Estonian Chamber of Commerce, the Order of the Cross Terra Mariana and the Cross of Service of the Ministry of Foreign Affairs of Estonia.

Radon served as Georgia's key foreign advisor and negotiator of the multi-billion dollar and multi-nation oil and gas pipelines, from Azerbaijan to Georgia to Turkey (the BTC). For his engaged representation of Georgia, Radon was awarded the country's highest civilian award, the Order of Honor, by President Eduard Shevardnadze. Radon has counseled Afghanistan in respect of the prospective TAPI gas pipeline from Turkmenistan in Central Asia to Afghanistan to Pakistan to India. Radon gave an address at the conference hosted by the Energy Charter Secretariat, the Ministry of Energy and Industry of Albania and the Secretariat of the Union for the Mediterranean where he challenged accepted wisdom on the rights and obligations of transit nations such as Albania.

Radon has lectured and worked in over 70 (and visited over 100) countries, including Afghanistan, Argentina, Azerbaijan, Cambodia, China, Estonia, French Polynesia, Germany, India, Kazakhstan, Kosova, Laos, Mexico, Mongolia, Mozambique, Nigeria, Peru, PNG, Poland, South Sudan, Turkmenistan, Uganda, Ukraine and Viet Nam. Radon was honored by being invited as a non-African expert to give an address on Asset Recovery and Natural Resources, with a focus on the lack of transparency and disclosure in the beneficial ownership of companies engaged in the extractive industry, to the annual meeting of the Southern African Forum Against Corruption (SAFAC) of the Southern African Development Community.

Radon has co-produced a speakers series with leaders of the world's small states, including St. Kitts and Nevis, St. Lucia, Suriname, Estonia, Kosovo, Lichtenstein, Luxembourg, and Vanuatu; was the faculty advisor for the documentary "Trade-Offs in a Green Economy – Deep Sea Mining in French Polynesia"; and has co-produced a documentary on Greenland's 2025 election titled "Under the world's microscope: The local Greenland perspective rings loudly for the world to hear,"

(https://www.youtube.com/watch?v=0T_1EwcJQLE), which won the Berlin Indie Short Festival for best short documentary as well as receiving other international film awards.

He has authored numerous articles and reports, including his anthology *"Walk Tall!, A Beautiful Tomorrow For Emerging Nations, An Anthology of Inclusive Principles For National Growth and Prosperity: Equity, Rule of Law and Sustainable Natural Resource Development,"* which was published in conjunction with the 2018 APEC conference in Papua New Guinea; *"Climate Action: What Does it Take? Legal Teeth, Not Just Corporate Words,"* *"Civil Society: the Pulsating Heart of a Country, its Safety Valve,"* and *"Beneficial Ownership Disclosures: The Cure for the Panama Paper Ills,"* Journal of International Affairs (Columbia University); *Resolving conflicts of interest in state-owned enterprises*, International Social Science Journal (UNESCO); *Staatsfonds vor den Toren* (Sovereign Wealth Funds Before the [Trojan] Gates), Frankfurter Allgemeine Zeitung (FAZ); *Getting Human Rights Right*, Stanford Social Innovation Journal; *How To Negotiate Your Oil Agreement*, in *Escaping the Resource Curse*, ed. Macartan Humphreys, Jeffrey Sachs and Joseph Stiglitz (Columbia University Press); *Hear No Evil, Speak No Evil, See No Evil Spells Complicity*, Compact Quarterly, published by the (United Nations) Global Compact; *Negotiating and Financing Joint Venture Abroad* in *Joint Venturing Abroad*, ed. N. Lacasse and L. Perret (Wilson & Lafleur Itee).

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Introduction

In order to understand, and appreciate, how oil and gas development can bring prosperity to a country, in particular emerging states, such as Namibia, it is not only necessary to learn from the lessons of other countries, as many countries have already undertaken this development path, but it is even more important to understand and keep in mind oil and gas industry fundamentals, its core characteristics, and their potential impact for and on a country. Only with such knowledge can public authorities, as well as civil society, address how oil and gas development can be a national economic driver and not fall to the infamous resource curse.

But, as will be noted, certain fundamentals are often, in fact too often, overlooked by countries, during negotiations with companies when engineering, construction and technical issues and a host of other contractual issues, not to mention critical financial issues, invariably become the focus of intense discussions. However, overriding fundamentals need always to be kept in mind by state officials during the negotiations. They should guide the views and the bargaining/negotiating positions of a state, not just in license and contract negotiations, but also in the formulation and drafting of the applicable policies, laws and regulations, including, in particular, tax, health and environmental laws.

This is not necessarily the case with developing countries as they seek foreign investment. There is a consciousness of a country's inadequate financial and technical resources, as well as technical expertise. What is not fully appreciated is that simply having significant oil and gas fields is an

asset, a strength, in and of itself.¹ It is an application of the traditional real estate maxim that the location of a property is the key determinate of the value of real estate. Owning significant oil and gas fields, which is not moveable and is permanent,² means that such countries are in reality partners, in fact full partners, with companies in prospective oil and gas development. A corollary of this perspective is that these companies can be viewed as service providers,³ of course valuable and necessary service providers with critical skills and technical, marketing and financial capability and resources, which need to be compensated. Admittedly, this perspective is controversial, highly so, and is not accepted by oil and gas companies⁴ for the simple reason that they view themselves as the owners of a tangible product, the produced oil and gas, and not as service providers. Still, what must be kept in mind is the basic fact that these companies cannot undertake oil and gas development and production unless the state, the owner of the asset, agrees and makes access to explore and exploit this asset possible. This means that a state, as already noted, should consider itself and be viewed as a partner in oil and gas development and its decision-making process.⁵

Moreover, as is well known, the exploitation of oil and gas is not without social costs. There is inevitable pollution, particularly and directly impacting the health of local communities

¹ Fischer, Leyon. "Energy Resources and Geopolitics: A Study of Oil and Gas Dependencies in Global Power Relations," April 5, 2024. <https://ijrrt.com/index.php/ijrrt/article/view/200>.

² Youvan, Douglas C. "Why Do Oil Fields Persist? A Biological and Geological Perspective on Hydrocarbon Degradation and Oil Reservoir Longevity." *Why Do Oil Fields Persist? A Biological and Geological Perspective on Hydrocarbon Degradation and Oil Reservoir Longevity*, January 1, 2024. <https://doi.org/10.13140/rg.2.2.30712.05125>.

³ Ghandi, Abbas, and C.-y. Cynthia Lin. "Oil And Gas Service Contracts Around the World: A Review." *Energy Strategy Reviews* 3 (April 19, 2014): 63–71. <https://doi.org/10.1016/j.esr.2014.03.001>.

⁴ Bret-Rouzaut, Nadine. "Economics of Oil and Gas Production." In *The Palgrave Handbook of International Energy Economics*, 3–22, 2022. https://doi.org/10.1007/978-3-030-86884-0_1.

⁵ International Monetary Fund. "The Taxation of Petroleum and Minerals Principles, Problems and Practice." In 4 *Petroleum Fiscal Regimes*. Routledge, 2010. <https://www.elibrary.imf.org/display/book/9780415781381/ch004.xml>

neighboring the oil and gas development,⁶ as well as the impact of fossil fuel exploitation on climate change affecting the entire world.⁷ These costs must be minimized to the maximum extent technically possible, at the start of development and throughout the life of the project.

Accordingly, there are sundry questions that need to be asked, and answered, in order to ensure that the above-mentioned fundamentals are not overlooked, the social and environmental costs are minimized, and, consequently, that oil and gas development actually becomes a driver of economic growth and prosperity with benefits for a country and all of its people, in this case Namibia. When the development process is undertaken deliberately, step-by-step, a process which I have coined the “turtle theory of development,” the oil and gas sector, which will remain a needed sector for the foreseeable future,⁸ can and should bring prosperity for a country, here Namibia, now and in the future for the next generations.

The following analysis, applying a question and answer format, addresses some of these sundry questions, but given the breadth and complexity of oil and gas development, not all questions can be asked or answered in one analysis. What the analysis does do is highlight key issues in a question format and addresses them based on my own professional experience, as a lawyer, advisor, a negotiator and academic, with insights drawn from countries around the world, of how

⁶ Nriagu, J., Udofia, E., Ekong, I., & Ebuk, G. (2016). Health Risks Associated with Oil Pollution in the Niger Delta, Nigeria. *International Journal of Environmental Research and Public Health*, 13(3), 346.

<https://doi.org/10.3390/ijerph13030346>;

Jill E. Johnston, Esther Lim, and Hannah Roh, “Impact of Upstream Oil Extraction and Environmental Public Health: A Review of the Evidence,” *The Science of the Total Environment* 657 (December 4, 2018): 187–99, <https://doi.org/10.1016/j.scitotenv.2018.11.483>.

⁷ Grasso, Marco. “Oily Politics: A Critical Assessment of the Oil and Gas Industry’s Contribution to Climate Change.” *Energy Research & Social Science* 50 (December 6, 2018): 106–15. <https://doi.org/10.1016/j.erss.2018.11.017>.

⁸ Mestneer, Raed Al, and Carlo Andrea Bollino. “Long-Term Forecasting Models of Oil Demand Emerging From the Global Petrochemical Sector.” *Energies* 17, no. 20 (October 11, 2024): 5046. <https://doi.org/10.3390/en17205046>;

IEA (2025), World Energy Outlook 2025, IEA, Paris <https://www.iea.org/reports/world-energy-outlook-2025>, Licence: CC BY 4.0 (report); CC BY NC SA 4.0 (Annex A).

to view and structure oil and gas development for a state, including factors and issues that need to be taken into account by a country during agreement and license negotiations with international oil companies, all with the objective of supporting Namibia in having its oil and gas resources become a driver for the prosperity of Namibia and its people. Admittedly, this analysis is simplified as such development is quite complex, involving many stakeholders and multiple disciplines, as well as judgement/decision making. The principles and lessons of how to bring about this prosperity for Namibia, and other developing countries, and avoid the resource curse were set forth in the book “Escaping the Resource Curse” edited by Macartan Humphreys, Jeffrey Sachs and Nobel Prize Laureate Joseph Stiglitz, including, specifically, my chapter titled “How to Negotiate an Oil Agreement”.⁹ Those principles and lessons are still true and applicable today, almost 20 years later, and also serve as a basis for this analysis.

What is oil and gas?

Oil and gas are fossil fuels found in the ground, whether on land or in the seabed. They are made of hydrocarbons that were naturally created over millions of years ago.¹⁰ Accordingly, they are not renewable. And, moreover, as long as they are in the ground they are permanent¹¹ — they do not disappear, which means they can be developed, and used, currently or at some time in the future, preferably all in accordance with national public policy and applicable laws.

⁹ Jenik Radon, “How to Negotiate an Oil Agreement,” in *Escaping the Resource Curse*, ed. Macartan Humphreys, Jeffrey D. Sachs, and Joseph E. Stiglitz. Columbia University Press, 2007.

¹⁰ Bradford, Travis. “Oil.” *The Energy System: Technology, Economics, Markets, and Policy*, MIT Press, 2018.

¹¹ Ibid.

Is oil and gas found everywhere in the world?

Oil and gas is found in many regions and countries, in the Middle East,¹² in Canada,¹³ in the US¹⁴ and other areas, including now in Namibia.¹⁵ But it is not found everywhere. This underscores the fact that location is the key factor.

What is the implication of the fact that oil and gas is not found everywhere?

Since oil and gas is not found everywhere, it means that those countries which have oil and gas are in a unique position as they possess a valuable asset.

Any company which wishes to develop oil and gas must literally go to where it is, to the country where it has been found. This puts a country blessed with this resource in a good negotiating position with any such company.¹⁶

It is a truism that a company, whether domestic or foreign, cannot develop an oil and gas field without the consent, approval, or even participation of that country, the legal owner of the field.

Who owns the found oil and gas?

As a general concept in nearly all countries, any oil and gas discovered is owned by the people of the country, the present generation as well as future generations, in short, the state as the

¹² In 2025 the Middle East produced 31.2 million barrels per day. See, Energy Institute. *Statistical Review of World Energy 2026*. Energy Institute, 2026.

¹³ In 2025 Canada produced 6.1 million barrels per day. Energy Institute. *Statistical Review of World Energy 2026*. Energy Institute, 2026.

¹⁴ In 2025 the US produced 21 million barrels per day. Energy Institute. *Statistical Review of World Energy 2026*. Energy Institute, 2026.

¹⁵ Major offshore discoveries since 2022 have focused particularly on Namibia's Orange Basin. See, Reuters. "Oil Exploration Boom in Namibia." *Reuters*, 21 June 2024, <https://www.reuters.com/business/energy/oil-exploration-boom-namibia-2024-06-21/>.

¹⁶ Vivoda, Vlado. "Resource Nationalism, Bargaining and International Oil Companies: Challenges and Change in the New Millennium." *New Political Economy* 14, no. 4 (November 13, 2009): 517–34. <https://doi.org/10.1080/13563460903287322>.

representative of the people. The United Nations General Assembly resolution 1803 (XVII) adopted on 14 December 1962 enshrined this concept as a universal principle: “*The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well-being of the people of the State concerned.*”¹⁷

It is important to be noted that this principle is interpreted and applied in practice differently by the United States. There, the private owner of a property where oil and gas is found is its owner. This principle has been enacted into the laws of the various federal states of the US, and it is the

Nauru: from Resource Wealth to Economic Collapse

In 1990, Nauru briefly became one of the world’s richest nations. Weak public financial management contributed to Nauru’s economic collapse.

unspoken perspective that drives the approach of many of the leading US-based oil and gas companies. In all other countries, the state, as the representative of a country’s

people, is the owner of any natural resources found. Moreover, in many countries, including Namibia, this principle is enshrined in a country’s constitution, the basic or fundamental law, of a country.¹⁸

It needs to be underscored that the owner of the fossil fuel also includes future generations. The challenge is how to secure this right in the course of development, namely when fossil fuel is converted from a permanent, in-ground, non-renewable asset to a liquid, financial, asset, the value of which, if not properly managed, can literally disappear. The case of Nauru is a warning and

¹⁷ United Nations General Assembly. “Permanent Sovereignty over Natural Resources.” *Resolution 1803 (XVII)*, 14 Dec. 1962, United Nations, https://legal.un.org/avl/ha/ga_1803/ga_1803.htm.

¹⁸ Republic of Namibia. *The Constitution of the Republic of Namibia*. 1990, Art. 100.

instructive. Nauru was unable to maintain the value of the proceeds from the development of its phosphates, and accordingly, did not reap any benefits for its present generation or for its future generations.¹⁹ It can be said that there was financial mismanagement of the cash proceeds from its natural resources, the phosphates.

What is the benefit of developing oil and gas?

As is well known, oil and gas provides energy and is necessary to empower our modern society with electricity, fuel and more.²⁰ Oil and gas, accordingly, has been and is in continuous demand around the world and will remain so for the foreseeable future.²¹ This is notwithstanding the steady increased use of wind, solar and nuclear in the transition away from the use of fossil fuels, as they have a polluting impact and are an acknowledged cause of climate change. Moreover, Namibia and most countries of the world, as they have made a commitment to decrease fossil fuel use at the UN Climate Change Conference (COP28) in December 2023, cannot ignore their commitment as they seek to benefit from oil and gas development and investment during this period of transition. Oil companies investing in Namibia and other countries should be required to ensure that their operations support meeting and satisfying such commitments and do not negatively impact a country's commitments,²² by for example, using the world's best technology, and continuously

¹⁹ In 1990, Nauru briefly became one of the world's richest nations as its phosphate revenues reached their peak. At the time, the Nauru Phosphate Royalties Trust held assets exceeding the equivalent of approximately US\$750,000 per capita. However, declining phosphate revenues, coupled with weak public financial management, ultimately contributed to Nauru's economic collapse.

See, International Monetary Fund, Asia and Pacific Department. *Republic of Nauru: 2019 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for the Republic of Nauru*. IMF Country Report No. 20/31, International Monetary Fund, 29 Jan. 2020.

²⁰ In 2024, consumption for oil and gas reached record high. See, International Energy Agency. "World Energy Outlook 2025I." *IEA*, <https://www.iea.org/world/oil>. Accessed 9 Aug. 2026.

²¹ The International Energy Agency forecasts future energy demand under three different scenarios. Under the Current Policies Scenario oil and natural-gas demand continues to grow through 2050. See, International Energy Agency. "World Energy Outlook 2025I." *IEA*, <https://www.iea.org/world/oil>. Accessed 9 Aug. 2026.

²² OECD (2023), *OECD Guidelines for Multinational Enterprises on Responsible Business Conduct*, OECD Publishing, Paris, <https://doi.org/10.1787/81f92357-en>.

upgrading such technology, to minimize pollution and health impacts and counter climate change by, among other things, curbing methane and other emissions.²³

During this period of transition away from the use of fossil fuels, a producing country, such as Namibia, can still benefit from the sale of oil and gas and have the earnings provide the funds needed for development, for schools, hospitals, health, infrastructure (although any infrastructure needed for the oil and gas development should be paid by the companies as part of the project cost) and investment in cleaner sources of energy.²⁴ The cost of infrastructure, which constitutes dual use, namely infrastructure which also provides benefit for a country generally and not just mainly for the oil and gas project, will have to be partially borne by the country. There is, however, no easy answer for determining how to fairly allocate such costs for dual use infrastructure with the consequence it will be an issue to be resolved in negotiation between the government and a company.²⁵ Of course, the earnings received by a country need to be invested, need to be managed, and professionally so. The wake-up lesson from Nauru should not be repeated and needs to be always kept in mind.

OECD (2023), *Managing Climate Risks and Impacts Through Due Diligence for Responsible Business Conduct: A Tool for Institutional Investors*, OECD Publishing, Paris, <https://doi.org/10.1787/8ace4fce-en>.

²³US EPA. “Implementation of Oil and Natural Gas Air Pollution Standards | US EPA,” May 4, 2026.

<https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-operations/implementation-oil-and-natural-gas-air>;

IEA (2026), *Global Methane Tracker 2026*, IEA, Paris <https://www.iea.org/reports/global-methane-tracker-2026>, Licence: CC BY 4.0;

US EPA. “Methane Mitigation Technologies Platform | US EPA,” May 15, 2026. <https://www.epa.gov/natural-gas-star-program/methane-mitigation-technologies-platform>?

²⁴ Berg, Andrew, Rafael A. Portillo, Susan S. Yang, and Luis-Felipe Zanna. *Public Investment in Resource-Abundant Developing Countries*. IMF Working Paper No. 12/274, International Monetary Fund, 2012.

²⁵McMillan Keck et al., “Toolkit On Cross-sector Infrastructure Sharing,” report, *Broadband Strategies Toolkit*, February 2017, <https://ccsi.columbia.edu/wp-content/uploads/2017/12/CrossSectorInfrastructureSharingToolkitfinal170228.pdf>;

Columbia University School of International and Public Affairs. Capstone Report 2013, “*Mozambique Extractive Resources for Development*,” Section 3. Faculty advisor Jenik Radon. Spring 2013.

<https://www.sipa.columbia.edu/mozambiques-extractive-riches-will-they-be-game-changer-and-road-prosperity-or-another-chapter>.

What is the challenge for a country to achieve benefits from the sale of oil and gas?

The core challenge can be summed up in one word — management.²⁶ This may come as a surprise to policy makers as management is normally a term/concept associated with business. But oil and gas development for a state is a business. However, it is not just business as this development also must be regulated and supervised by the state for the common good of a country and its people. This presents a conundrum, and an institutional and political conflict, for a country given all of the issues that have to be managed and, at the same time, regulated. There is management of the discovery, management of the issuance of the exploration and exploitation licenses and agreements, management of the production, management of the environment and health licenses, management of the earnings, management of the investment, management of the drafting, adoption, implementation and enforcement of the necessary laws and regulations, management of contracts, and more. In short, a state is challenged in balancing, managing these multiple issues.

The Core Challenge: Management

Oil and Gas development for a State is a business, but it must also be regulated.

Management is not an issue as long as oil and gas are in the ground. Its value, among other things, is in many ways static with the consequence it does not have to be managed, supervised. But once oil and gas is in the process of being produced and sold, the resultant proceeds, earnings, must be managed, whether as part of the budget, invested, saved and/or distributed.

The system of fossil fuel management necessitates professionals with diverse skills, expertise and knowledge of multiple disciplines from engineers, to finance professionals, lawyers, negotiators,

²⁶ O'Neill, Donal A., *"Impact Assessment, Transparency and Accountability – three keys to building sustainable partnerships between Business and its Stakeholders"*, Peace through Commerce: Responsible Corporate Citizenship and the Ideals of the United Nations Global Compact, Edited by Oliver F. Williams, 2008.

accountants, inspectors, regulators, general managers, among others.²⁷ The challenge for a country, such as Namibia, which is suddenly blessed with a discovery of a significant amount of oil and gas is that it does not necessarily have the experts and the professionals, or the number of such experts and professionals, which are needed to manage, oversee, this new sector.²⁸ That is not a surprise as there was no need for such experts and professionals prior to the discovery. So, the challenge is how does Namibia secure such expertise in the short term and in the long term.

How can the necessary management and expertise be obtained for a country such as Namibia?

Unfortunately, there is no silver bullet; no immediate solution to this challenge as such professionals, and in significant numbers, are needed almost immediately, and at the time of discovery. The appropriate domestic professionals and experts must first be educated, trained, and they will only become experienced over time.²⁹ The consequence is that there is no alternative in the short run to engaging and hiring outside, international, foreign professionals,³⁰ admittedly at considerable expense — experts are expensive. Indeed, Norway, which today is “the” model of oil and gas industry management also initially engaged international professionals and relied on international oil companies for technical capabilities.³¹

²⁷ Ibid; Cameron, Peter D., and Michael C. Stanley. *Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries*. World Bank, 2017.

²⁸ A recent assessment of Namibia’s oil and gas workforce found that certain critical technical qualifications were “insufficient in terms of volume” and that “specific O&G qualifications do not exist in-country.” See, Deloitte. *Oil & Gas Industrial Baseline Survey – Namibia: Final Report*. Aug. 2024, pp. 6, 138.

²⁹ Deloitte. *Oil & Gas Industrial Baseline Survey – Namibia: Final Report*. Aug. 2024, pp. 206–07.

³⁰ Sigam, Claudine. “Human Capacity Problems in Developing Countries and Local Content Requirements in the Extractive Industries.” *Ecdpm.Org*. GREAT Insights Volume 1, Issue, July 5, (Dec. 2013).

<https://ecdpm.org/work/extractive-sector-for-development-volume-1-issue-5-july-2012/human-capacity-problems-in-developing-countries-and-local-content-requirements-in-the-extractive-industries>.

³¹ During the early years of exploration, Norwegian authorities recognized that the major international oil companies possessed both the technological expertise and the capital necessary to identify and develop the country’s potential petroleum resources. Norway therefore initially depended on multinational companies to develop these resources. Accordingly, the state’s early petroleum policy focused on attracting international oil companies, together

As an aside, any such engagement should be coupled with a requirement that these professionals train and educate their successors. As oil and gas development does not employ many people once production starts, a country needs to ensure that its citizens have the skills and expertise to take on and assume complex technical and management positions, which will constitute the main employment opportunities in this sector. But local businesses, in particular small businesses, can also support the oil and gas sector in providing necessary supplies, materials and services such as food, transport, tools and accounting. All of this requires a national plan with input from oil and gas companies on their short and long term needs. It also requires that the companies provide binding commitments on the hiring of qualified locals and the goods and services that can be sourced locally. The companies should be required to specify how they will train and support local businesses to meet their needs.³² Moreover, such commitments must be binding and need to be undertaken within a country's legal framework.

What are the steps that a country must undertake to ensure that oil and gas development is an economic growth driver?

The key, and indispensable step, is to ensure the robustness of a country's legal framework which serves as the foundation of its oil and gas governance system.³³ In a rush to develop the oil and gas sector, getting the laws right plays, applying a sports analogy, catch-up ball. The reason is simple. As oil and gas development will be a new economic sector in a developing country, the

with the capital, technology, and expertise they could provide. See, Norwegian Ministry of Petroleum and Energy. *An Industry for the Future: Norway's Petroleum Activities*. Meld. St. 28 (2010–2011), Government of Norway, 2011.

³² Tordo, Silvana, Michael Warner, Osmel E. Manzano, Yahya Anouti, and The World Bank. *Local Content Policies in the Oil and Gas Sector*. World Bank, 2013. <https://doi.org/10.1596/978-0-8213-9931-6>.

³³ Jenik Radon, "The Establishment of the Rule of Law: What Does It Take—National Will," in *Walk Tall! A Beautiful Tomorrow for Emerging Nations: an Anthology of Inclusive Principles for National Growth and Prosperity : Equity, Rule of Law and Sustainable Natural Resource Development*, 2018., chapter 19.;

This article was originally published in 20 Fordham International Law Journal 365 (1997) titled "Permitted Unless Prohibited: The Changed Soviet Mentality".

country will not have an established, or internationally accepted, legal system to govern this new sector. In fact, as an emerging country's legal system is generally still in a formative stage, especially in comparison to that of such developed countries as Canada,³⁴ Australia³⁵ and Norway which admittedly had to play catch up ball, as for example, in some cases oil and gas development also started before environment protection became a requirement, a pressing issue. But these countries had an advantage in comparison to most developing nations.³⁶ These countries had a credible and reliable legal system that enabled them to integrate petroleum regulation into that system. They had an established, tested, legal system upon which to build. But such a reliable system that is accepted by the international community cannot be built overnight or rapidly. And in building a sound legal system, as well as drafting contracts, a truism must always be kept-in-mind: the devil is in the details.

To compensate and to attract foreign investors,³⁷ contractual arrangements such as production sharing agreements (PSAs) have come to be used to, among other things, fill gaps in a country's legal system with agreed, or more accurately, negotiated, financial, environmental and other contractual provisions between a country and an international oil company. It is not an overstatement to say that PSAs became laws unto themselves, often overriding laws.³⁸ In case of

³⁴ David H. Breen, *Alberta's Petroleum Industry and the Conservation Board* (University of Alberta Press 1993).

³⁵ See, Crommelin, Michael. "Governance of Oil and Gas Resources in the Australian Federation." *Melbourne University Law Review*, vol. 33, no. 2, 2009, pp. 399–423.

³⁶ See, T Thurber, Mark C., et al. "Exporting the 'Norwegian Model': The Effect of Administrative Design on Oil Sector Performance." *Energy*, vol. 39, no. 9, 2011, pp. 5366–5378.

³⁷ Pongsiri, Nutavoot. "Partnerships in Oil and Gas Production-sharing Contracts." *International Journal of Public Sector Management* 17, no. 5 (August 1, 2004): 431–42. <https://doi.org/10.1108/09513550410546606>; Rajkumar. "Production Sharing Contract for Exploitation of Hydro Carbon Resources." *Energy Law Reports*, vol. 2, pt. 2, June 2014, pp. 165–170. Manupatra, <https://docs.manupatra.in/newsline/articles/Upload/C7C7E045-371A-4CC8-884D-9EE2371C19F3.pdf>.

³⁸ See, for example, the Indonesian Supreme Court, an actual judicial authority treated the Production Sharing Agreement as a special legal regime that prevailed over general legal rules governing the same subject matter. Ortax. "Putusan Mahkamah Agung Nomor: 2747/B/PK/Pjk/2018 - Ortax." Putusan Pengadilan - Ortax, March 29, 2019. <https://datacenter.ortax.org/ortax/putusan/show/6247>.

Azerbaijan, PSAs were adopted by the parliament and thereby each PSA in fact became a law.³⁹ However, PSA contractual provisions, set forth in agreements that are generally between 100 to 150 pages, are inadequate as they cannot replace, or fill in for, a detailed and full body of laws, especially in respect of such critical laws on environment, health, labor, construction, local content, amongst others. Moreover, the laws on the environment and health need to be periodically and regularly updated to take account of new scientific and health findings and knowledge, as well as innovative technologies.⁴⁰

Furthermore, such contractual provisions often stipulate vague, imprecise, and, prospectively, litigious-prone standards.⁴¹ These so-called standards then become unclear operational requirements. For example, petroleum operations, in particular, how to treat waste, may be required to be carried out in an environmentally acceptable and safe manner without specifying any operational standard on what that entails.⁴² What is environmentally acceptable to and for whom? In many countries such vague standards have even been enacted into law,⁴³ which makes

³⁹ See, for example, <https://permanent.access.gpo.gov/lps3997/9902subs.htm>, “Each PSA must be approved separately by the Azerbaijan Parliament.”

See also, https://www.bp.com/content/dam/bp/country-sites/en_az/azerbaijan/home/pdfs/legalagreements/psas/acg_psa.pdf? verified executed copy of the PSA signed between the consortia of international oil companies and The State Oil Company Of The Azerbaijan Republic (“SOCAR”) stating that “upon approval by the Parliament of the Azerbaijan Republic of the [PSA], the [PSA] shall constitute a law of the Azerbaijan Republic and shall take precedence over any law (or part thereof) of the Azerbaijan Republic which is inconsistent with or conflicts with any of the provisions of the [PSA]”.

See also, <https://documents1.worldbank.org/curated/en/835831468779115941/pdf/multi0page.pdf>? a World Bank document stating that “The PSA was then ratified by Azerbaijan Parliament and became effective on December 12, 1994.”

⁴⁰ Cosens, Barbara, J. B. Ruhl, Niko Soininen, Lance Gunderson, Antti Belinskij, Thorsten Blenckner, Alejandro E. Camacho, et al. “Governing Complexity: Integrating Science, Governance, and Law to Manage Accelerating Change in the Globalized Commons.” *Proceedings of the National Academy of Sciences* 118, no. 36 (September 2, 2021). <https://doi.org/10.1073/pnas.2102798118>.

⁴¹ Peters, M.S. Production Sharing Agreements: Learning Lessons from Russia and Nigeria. *J. Environ. Law Policy* 2021, 01, 27–57, <https://doi.org/10.33002/jelp01.03.02>

⁴² “ResourceContracts.org - Model Contract, PSA, 1999,” n.d. <https://www.resourcecontracts.org/contract/ocds-591adf-2078279301>.

⁴³ See for example, Namibia, *Petroleum (Exploration and Production) Act 1991*, Act No. 2 of 1991 (defining “good oilfield practices” as practices generally applied internationally as good, safe, efficient and necessary in petroleum exploration or production);

enforcement a negotiated matter as reasonable people can reasonably differ on how to interpret such a provision.⁴⁴ This can have the further unintended consequence of corruption as companies seek to entice an official to accept a certain interpretation.

A country's laws must, of course, be able to address the inevitable complexity presented by oil and gas development. Such development is also dynamic as exploration and exploitation, as well as construction and environmental standards, not to mention legal concepts as piercing the corporate veil⁴⁵, evolve or change over time⁴⁶. No aspect of development is static.

It needs to be recalled that oil and gas laws in many developing countries were adopted in anticipation, and in the hope of the discovery of oil and gas and prior to, and without, any experience with oil and gas development. Unfortunately, they generally have not been adequately updated or amended since first enacted.⁴⁷

Australia, *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth), s. 569 (requiring petroleum exploration and recovery operations to be carried out “in accordance with good oilfield practice”); However, Australia had established a legal system, including its judiciary, to draw upon for interpretation and meaning of such vague and imprecise terms.

Papua New Guinea, *Oil and Gas Act 1998* (incorporating “good oilfield practice” as a statutory standard governing petroleum operations); Nigeria, *Petroleum Industry Act 2021* (incorporating “good international petroleum industry practice” into the statutory petroleum regime).

⁴⁴ See, Martin, A. Timothy. “Good Oilfield Practice: Its History and Evolution.” *The Journal of World Energy Law & Business*, vol. 17, no. 6, 2024, pp. 351–406.

⁴⁵ Cornell Law School, Legal Information Institute, “Piercing the Corporate Veil.” https://www.law.cornell.edu/wex/piercing_the_corporate_veil

⁴⁶ Timothy Fitzgerald, Regulatory Obsolescence Through Technological Change in Oil and Gas Extraction, 43 Wm. & Mary Envtl L. & Pol'y Rev. 137 (2018), <https://scholarship.law.wm.edu/wmelp/vol43/iss1/5>

⁴⁷ See generally, Guyana, *Petroleum (Exploration and Production) Act 1986*, Act No. 3 of 1986 (remaining the principal petroleum legislation through Guyana's transformative offshore discovery in 2015 and first production in 2019, before being replaced by the *Petroleum Activities Act 2023*); Namibia, *Petroleum (Exploration and Production) Act 1991*, Act No. 2 of 1991 (establishing the country's petroleum exploration and production framework decades before the major offshore discoveries beginning in 2022); Ghana, *Petroleum (Exploration and Production) Law 1984*, P.N.D.C.L. 84 (preceding the major Jubilee discovery in 2007 and subsequently replaced by the *Petroleum (Exploration and Production) Act 2016*). See also Suriname, *Petroleum Law 1990*, S.B. 1991 No. 7 (predating Suriname's recent large-scale offshore discoveries, although Suriname already possessed experience with onshore petroleum production); Papua New Guinea, *Oil and Gas Act 1998* (providing the principal statutory framework for petroleum exploration and development).

In contrast to petroleum regimes that rely heavily on negotiated PSAs to fill in gaps in domestic law, countries such as Canada, Australia, Norway, Colombia and Brazil grant petroleum rights through licensing, concessions or other petroleum agreements that are built on, and integrated into, an extensive body of existing laws and regulations.⁴⁸ The license effectively grants a company the right to explore for and develop petroleum in accordance with requirements already established by the applicable legal and regulatory framework. Although licenses may be accompanied by agreements, project-specific conditions, and negotiated financial or commercial terms, these instruments supplement, rather than substitute for, the broader domestic legal framework.

Accordingly, the key “first” step is to establish a clear, comprehensive, and adaptable body of law

First Step: Get the Legal Framework Right

A legal framework is the foundation of an effective oil and gas governance system.

that defines the fundamental rights, obligations and standards applicable to petroleum operations. Petroleum agreements can, and inevitably will, supplement that

framework by addressing project-specific, commercial and technical matters. They should not, however, be expected, or used, to substitute for deficiencies or gaps in the underlying law.

What are other contractual and legal issues that are of particular concern in oil and gas projects?

A goal for any country in undertaking an oil and gas project is to drive the economy. This means optimizing returns for the country from royalties, taxes and fees, and minimizing such inevitable

⁴⁸ Salih, Rdhwan Shareef, and Akram Yamulki. “Petroleum Exploration and Production Contracts as Regulatory Tools: The Kurdistan Region Production Sharing Contracts.” *Journal of Law Policy and Globalization*, September 1, 2020. <https://doi.org/10.7176/jlpg/101-17>.

costs as environmental damage.⁴⁹ Whether this objective is achieved, however, depends in significant part on how the provisions governing the petroleum investment are structured. Licenses, petroleum agreements and/or PSAs may contain provisions that reduce or defer the revenues that a state receives from the exploitation of its oil and gas resources. Poorly structured royalty provisions, failure to even consider the imposition of a windfall profits tax, which admittedly, are considered controversial, ambiguous inter-company transfer pricing provisions, and overly generous cost recovery mechanisms, can significantly diminish the benefits ultimately received by a country.

How should a country structure royalties for the extraction of its oil and gas resources?

The basic concept of royalties is that it represents a payment to a state, the minimum payment, for the extraction, conversion and permanent loss of a finite, non-renewable asset.⁵⁰ Once this asset is extracted, it is no longer replaceable. For this reason, a country should consider establishing a fixed minimum royalty. Royalties should not be variable and should not be deferred until after the international oil company has recovered its costs. In a production-sharing regime, the royalty should therefore be paid before production is allocated to cost recovery.

Taxes are different, and they vary according to income and are normally progressive. But royalties, as noted, need to be set as it is payment for use of an asset; and they are accordingly based on production, not income. Admittedly, royalty rates for onshore oil vary widely around the world,

⁴⁹ International Monetary Fund. "Revenue from the Oil and Gas Sector: Issues and Country Experience." *Fiscal Policy Formulation and Implementation in Oil-Producing Countries*, International Monetary Fund, 2003. <https://www.elibrary.imf.org/display/book/9781589061750/ch006.xml>.

⁵⁰ Cameron, Peter D., and Michael C. Stanley. Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries. World Bank, 2017. <https://documents1.worldbank.org/curated/en/222451496911224999/pdf/Oil-Gas-and-Mining-A-Sourcebook-for-Understanding-the-Extractive-Industries.pdf>.

generally, from 5% to 25% but most are nearer to 10% to 15%.⁵¹ The royalty rates for offshore are comparable and also vary widely.⁵² The only conclusion that can be drawn from this variance is that a country's negotiators must be skilled in negotiating an appropriate and significant rate, which, it must be noted, are almost always set for the life of a project, namely 25 to 50 years.

Should there “even” be a windfall profits tax?

Another issue is how a country's fiscal regime should address profits that substantially exceed those anticipated when the investment was made. Profit or income taxes to international oil companies are frequently set, even if they are progressive, for the life of a project, 25 - 50 years.⁵³ However, the market price of oil and gas can vary widely during that period. The question which has arisen is whether there should be a windfall profit tax if the market price of oil and gas exceeds a specified amount, whether because of war or other unexpected events, or simply increased demand.

While it is considered a highly controversial issue with international oil and gas companies, a windfall tax should be imposed.⁵⁴ Companies make the original investment based on an internal rate of return on investment (ROI). Unexpected market factors, whether resulting from an

⁵¹ Daniel, Philip, Brenton Goldsworthy, Wojciech Maliszewski, Diego Mesa Puyo, and Alistair Watson. “Petroleum Fiscal Regimes.” *The Taxation of Petroleum and Minerals: Principles, Problems and Practice*, edited by Philip Daniel, Michael Keen, and Charles McPherson, Routledge and International Monetary Fund, 2010.

<https://www.elibrary.imf.org/display/book/9780415781381/ch004.xml>

⁵² For example, a comparative analysis report of the IMF shows an offshore royalty rate of 18.75% for U.S. federal offshore production and 7.5% for offshore production in Tanzania, while Sierra Leone applies rates that vary according to water depth, including 10% and 8%. See, International Monetary Fund. *Guyana: A Reform Agenda for Petroleum Taxation and Revenue Management*. IMF Country Report No. 17/367, International Monetary Fund, 2017, pp. 86–87. <https://www.imf.org/-/media/Files/Publications/CR/2017/cr17367.ashx>.

⁵³ Tordo, Silvana, et al. *Balancing Petroleum Policy: Toward Value, Sustainability, and Security*. World Bank, 2010. <https://documents1.worldbank.org/curated/pt/326461556725810981/pdf/Balancing-Petroleum-Policy-Toward-Value-Sustainability-and-Security.pdf>.

⁵⁴ Baunsgaard, Thomas, and Nate Vernon. “Taxing Windfall Profits in the Energy Sector.” *IMF Notes*, no. 2022/002, International Monetary Fund, Aug. 2022. <https://www.imf.org/-/media/files/publications/imf-notes/2022/english/insea2022002.pdf>

emergency or otherwise, which result in an unanticipated spike in the market price of the oil and gas, are literally a windfall. It must also be kept in mind that the underlying oil and gas was an asset owned by a country before it was converted. So, one can argue that a country should have a share in an unexpected windfall. This also underscores the need for expert negotiators to ensure that a country receives its fair share.⁵⁵

How should a country treat the pricing of inter-company transactions?

An overlooked challenge that seems to have no end is how to treat inter-company transfer pricing.⁵⁶ Petroleum laws, licenses or petroleum agreements, as is standard and normal, permit an operating oil company to ‘recover’ certain business costs, particularly up-front costs, incurred in carrying out petroleum operations, or to have such costs, among others, be deducted in determining taxable income.⁵⁷ The higher the costs attributed to the operating company, the lower the amount of profit or taxable income that will ultimately be available to the country. This creates a particular concern where the operating company purchases services, equipment, financing, or other goods, or receives loans from its own parent company or an affiliated company. There is a risk that the price charged by the parent or affiliate company may exceed the price that would have been charged in an open-market transaction. The accounting principle is that such prices should be at arms-length⁵⁸ and at market rate.⁵⁹ The difficulty, however, is determining what the arm’s length price actually is.

⁵⁵ Ibid.

⁵⁶ Columbia University School of International and Public Affairs. Capstone Report, 2025, “Creating a World-Class Revenue Agency for Namibia: NamRA.” Faculty advisors Jenik Radon, Eric Chang.; Columbia University School of International and Public Affairs. Capstone Report, 2026, “Maximizing Revenues for a Sustainable Future: Natural Resource Taxation in Namibia.” Advised by faculty advisors Jenik Radon, Eric Chang.

⁵⁷ Calder, Jack. “Transfer Pricing—Special Extractive Industry Issues.” *International Taxation and the Extractive Industries*, edited by Philip Daniel et al., International Monetary Fund, 2017. <https://www.elibrary.imf.org/display/book/9781475539660/ch004.xml>.

⁵⁸ Ibid.

⁵⁹ The OECD has established transfer pricing guidelines. See, Organisation for Economic Co-operation and Development. *OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 2022*. OECD Publishing, 2022. https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/01/oecd-transfer-pricing-guidelines-for-multinational-enterprises-and-tax-administrations-2022_57104b3a/0e655865-en.pdf

Accordingly, clear and project specific transfer pricing standards should be specified in statutes and regulations with a right in the state to audit all such purchases and loans to ensure that they are directly for the project and satisfy such standards.

Moreover, inter-company transactions also raise cost-recovery issues. Under PSAs, licenses or other petroleum agreements, international oil companies often negotiate that no profits are distributed, or royalty is paid, until its project investment costs are recovered. The issue is therefore not only whether an inter-company transaction is priced at arm's length, but also whether the expenditure should qualify as a recoverable cost, over what time period should it be repaid, and

whether the amount recoverable should be capped.⁶⁰ Making these determinations requires coordination among the government institutions with the relevant

The Fiscal Terms Matter

Poorly structured royalty provisions, failure to even consider the imposition of a windfall profits tax, ambiguous inter-company transfer pricing provisions, and overly generous cost recovery mechanisms, can significantly diminish the benefits ultimately received by a country.

petroleum, tax, financial, and accounting expertise.⁶¹

How should conflicts between petroleum agreements and tax laws be addressed?

The fiscal framework governing an oil and gas project does not exist solely in the oil and gas law, the PSA and/or the petroleum agreement or license. It also operates within and must be coordinated with the country's existing tax laws. Accordingly, negotiating a PSA or license cannot be undertaken in isolation from the tax framework.⁶²

⁶⁰ Ibid.

⁶¹ Extractive Industries Transparency Initiative. "Project Costs." *EITI*. <https://api.eiti.org/guidance-notes/project-costs>.

⁶² International Monetary Fund, "Fiscal Regimes for Extractive Industries—Design and Implementation," *MF Policy Paper* 2012, no. 65 (August 16, 2012), <https://doi.org/10.5089/9781498340069.007>.

One example is the treatment of prospective end-of-project clean-up and decommissioning costs. Normally under PSAs, decommissioning costs are required to be deposited annually or periodically into an end-of project abandonment fund. Moreover, in a PSA such costs are often stipulated as cost-recoverable costs. However, under tax laws such costs are normally only allowed to be deducted when the clean-up cost is actually incurred, which, in this case, would be years later at the end of the project.⁶³ How to reconcile such accounting and policy differences also requires transparent communication, coordination and determination between the agency that is negotiating the PSA or license and the tax authority.

What are other policy issues of particular concern in oil and gas projects?

Lack of coordination among government institutions, which are the backbone and operational foundations of any governance system,⁶⁴ may result in PSAs, licenses, petroleum agreements or laws being negotiated without the participation of the authorities with the relevant expertise or responsibility for matters that intersect with oil and gas development, such as environment, agencies/ministries local communities, public health, authorities amongst others.⁶⁵ This results in the inclusion of provisions that even conflict with or modify a country's existing environmental and social protection regulations.

⁶³ Tax treatment varies significantly by jurisdiction. See, Sachs, Lisa E., et al. *Decommissioning Liability at the End of Offshore Oil and Gas*. Columbia Center on Sustainable Investment and Sabin Center for Climate Change Law, 2025. https://ccsi.columbia.edu/sites/ccsi.columbia.edu/files/content/docs/Sabin-Center-CCSI-decommissioning-liability-offshore-oil-gas.pdf?utm_source=chatgpt.com.

⁶⁴ Clase, Cara. "The 'Resource Curse': Princeton-led Study Shows Why Natural Resource Abundance Can Be a Double-Edged Sword." *Center for Policy Research on Energy and the Environment (C-PREE)*. April 22, 2026.; Mehlum, H., Moene, K. and Torvik, R. (2006), Institutions and the Resource Curse*. *The Economic Journal*, 116: 1-20. <https://doi.org/10.1111/j.1468-0297.2006.01045.x>

⁶⁵ Ibid.

How Can a Country Ensure Effective Institutional Coordination in Managing Oil and Gas Development?

PSAs may stipulate environmental standards which may differ from local domestic law or create new standards without consultation, approval of the authorized ministry, and the environmental ministry.⁶⁶ The negotiation of any such provisions should therefore involve the competent relevant environmental authorities. Indeed, institutional coordination is needed in order to be consistent with the country's broader social, public health, and environmental objectives.⁶⁷ Careful and exact drafting of the provisions governing an oil and gas project must, therefore, be accompanied by a close-working relationship among the ministries and agencies whose respective mandates may be affected.⁶⁸

Furthermore, a country's existing oil and gas laws may even handicap the work of the environmental agency or the ministry. Indeed, oil and gas regulations may often constrain or limit environmental regulation or technical authorities responsible for environmental protection. For example, section 71 of Namibia's 1991 Petroleum Act provides that, following an oil spill, pollution or resulting environmental damage, a production license holder must take the necessary remedial measures "in accordance with good oilfield practices." The Act defines "good oilfield practices" as those generally applied in petroleum-producing countries. However, the world has many oil-producing countries. Norway, for example, has strict regulation of gas flaring;⁶⁹ the US

⁶⁶ Tienhaara, Kyla. "Foreign Investment Contracts in the Oil & Gas Sector: A Survey of Environmentally Relevant Clauses." *Investment Treaty News*, International Institute for Sustainable Development, 7 Oct. 2011. <https://www.iisd.org/itn/2011/10/07/foreign-investment-contracts-in-the-oil-gas-sector-a-survey-of-environmentally-relevant-clauses/>.

⁶⁷ Cameron, Peter D., and Michael C. Stanley. *Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries*. World Bank, 2017, pp. 118–19. <https://doi.org/10.1596/978-0-8213-9658-2>.

⁶⁸ Ibid.

⁶⁹ World Bank. *Regulation of Gas Flaring and Venting: 28 Case Studies from around the World*. Global Gas Flaring Reduction Partnership, May 2022, pp. 136–41,

regulations are mixed;⁷⁰ and Russian regulations are considered weak.⁷¹ The natural question is what are good oilfield practices concerning flaring. The reliance on such a vague and imprecise standard will hinder and prevent effective environmental regulation and may also result in litigation. So, a better approach is to mandate the highest and best standards imposed anywhere in the world or refer to a specific standard, such as that of Norway, and have that standard apply in the absence of a specific local law.⁷² In order to protect the environment for all generations, a country should enact the polluter pay principle as the cost of pollution stemming from oil and gas development should be a company cost as it is a project cost, not a public cost.⁷³

The foregoing again underscores the need for coordinated administrative/institutional management of the national oil and gas development process with the support of international experts.⁷⁴ Failure in this regard has also been identified as a cause of the resource curse in many countries.

How can a developing country provide a reliable investment environment while preserving its regulatory sovereignty?

As already noted, one of the main issues developing countries face in attracting investment in the oil and gas sector is an investor's skepticism regarding the reliability and predictability of the

<https://thedocs.worldbank.org/en/doc/fd5b55e045a373821f2e67d81e2c53b1-0400072022/related/Global-Flaring-and-Venting-Regulations-28-Case-Studies-from-Around-the-World.pdf>.

⁷⁰ U.S. Department of Energy, Office of Fossil Energy and Carbon Management. "State-Level Natural Gas Flaring and Venting Regulations." *U.S. Department of Energy*, <https://www.energy.gov/hgeo/state-level-natural-gas-flaring-and-venting-regulations>. Accessed 20 Aug. 2026.

⁷¹ World Bank. "Russian Federation." *Global Flaring and Methane Reduction Partnership: Global Flaring and Venting Regulations*, updated Sept. 2021, <https://flaringventingregulations.worldbank.org/russian-federation>. Accessed 20 Aug. 2026.

⁷² Article 12, "Environment, Health, Safety And Social Impact," of the Georgia Host Government Agreement, 1999. retrieved from https://www.bp.com/content/dam/bp/country-sites/en_az/azerbaijan/home/pdfs/legalagreements/gov-agreements/btc_eng_agmt2_agmt2.pdf

⁷³ Grantham Research Institute on Climate Change and the Environment. "What Is the Polluter Pays Principle?," August 15, 2024. <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-the-polluter-pays-principle/>;

⁷⁴ Peter D. Cameron and Michael C. Stanley, *Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries*, 2017, <https://doi.org/10.1596/978-0-8213-9658-2>;
Heller, Patrick R.P. and Dr. Valérie Marcel. "Institutional Design in Low-Capacity Oil Hotspots." Natural Resource Governance Institute, August 31, 2012. <https://resourcegovernance.org/>.

domestic legal system. To attract investment, developing countries need to provide protections and legal certainty associated with what has been perceived as an “internationally accepted legal system.”⁷⁵ What constitutes an internationally accepted legal system is, however, not a defined concept. Still, the concept has come to be generally viewed as a system that has been tried and tested. A system that can be relied on, even if not perfectly. A system that is predictable within reason.⁷⁶ A system that is not prejudiced or discriminatory against foreign investment or biased in favor of local investment.⁷⁷ Whether these perceptions, or assumptions, are correct is not of consequence, as they have come to be the basis or the rationale for emerging nations, such as Namibia, to address this perception and enter into bilateral investment treaties (BITs).⁷⁸

What are Bilateral Investment Treaties?

Bilateral investment treaties are agreements between two countries that stipulate the governing provisions for investments made by investors from one country, the investor’s home country, in another country, the investment host country. These agreements afford qualifying foreign investors certain protections intended to provide greater legal certainty and predictability for their

⁷⁵ Columbia Center on Sustainable Investment. “Advocates Say ISDS Is Necessary Because Domestic Courts Are ‘Inadequate,’ But Claims and Decisions Don’t Reveal Systemic Failings.” *Columbia Center on Sustainable Investment*, 29 Nov. 2021. <https://ccsi.columbia.edu/news/advocates-say-isds-is-necessary-because-domestic-courts-are-inadequate-but-claims-and-decisions-dont-reveal-systemic-failings/>.

⁷⁶ World Bank Group, *Investment Law Reform*, World Bank, Washington, DC eBooks, 2010, <https://doi.org/10.1596/25206>;

Perry A. Effective Legal Systems and Foreign Direct Investment: In Search of the Evidence. *International and Comparative Law Quarterly*. 2000;49(4):779-799. doi:10.1017/S0020589300064654.

⁷⁷ OECD (2020), OECD Investment Policy Reviews: Indonesia 2020, OECD Investment Policy Reviews, OECD Publishing, Paris, <https://doi.org/10.1787/b56512da-en>

⁷⁸ Namibia currently has eight bilateral investment treaties (BITs) in force: the Germany–Namibia BIT (1994); Namibia–Switzerland BIT (1994); Malaysia–Namibia BIT (1994); France–Namibia BIT (1998); Finland–Namibia BIT (2002); Namibia–Netherlands BIT (2002); Namibia–Spain BIT (2003); and Austria–Namibia BIT (2003). See United Nations Conference on Trade and Development (UNCTAD), *International Investment Agreements Navigator: Namibia*, Investment Policy Hub, <https://investmentpolicy.unctad.org/international-investment-agreements/countries/145/namibia>.

investments.⁷⁹ They also provide foreign investors with access to independent, non-local, decision-makers in case of a dispute — namely, by allowing claims concerning alleged violations of the protections afforded under the treaty to be submitted to international arbitration known as international state dispute settlement mechanisms (ISDS).

These provisions are often considered one-sided⁸⁰ because the protections afforded under bilateral investment treaties are generally granted only to qualifying foreign investors, while the corresponding obligations are imposed only on the host state.⁸¹ The investor is afforded rights under the treaty, but is generally not subject to any corresponding treaty obligations for fulfillment of project or investment commitments,⁸² such as hiring of local labor. As a consequence, it is the investor that can bring a claim against the host state for an alleged violation of the treaty, while the host state cannot bring an equivalent treaty claim against the investor for a violation of the investor's obligations.⁸³

What are the risks associated with bilateral investment treaties and ISDS?

In addition to the asymmetry mentioned above, there are numerous risks associated with BITs and ISDS. As investors seek a predictable legal environment, they seek to structure their investment in a manner that provides them with the greatest possible protection. Consequently, international oil

⁷⁹ Johnson, Lise. "State Control Over Interpretation of Investment Treaties." *Columbia Center on Sustainable Investment*, 30 Apr. 2014. <https://ccsi.columbia.edu/state-control-over-interpretation-of-investment-treaties/>.

⁸⁰ Jenik Radon, "BITs, Investment Dispute Resolution, Public Policy: a Volatile Mix," in *Walk Tall! A Beautiful Tomorrow for Emerging Nations: an Anthology of Inclusive Principles for National Growth and Prosperity : Equity, Rule of Law and Sustainable Natural Resource Development*, 2018., chapter 26.

This article was co-authored with Lidia Cano.

⁸¹ Johnson, Lise, Lisa Sachs, and Jeffrey Sachs. *Investor-State Dispute Settlement, Public Interest and U.S. Domestic Law*. Columbia Center on Sustainable Investment, 29 May 2015. <https://ccsi.columbia.edu/investor-state-dispute-settlement-public-interest-and-us-domestic-law/>

⁸² United Nations Conference on Trade and Development, "Global Governance and Policy Space for Development," *TRADE AND DEVELOPMENT REPORT* (United Nations, 2014), https://unctad.org/system/files/official-document/tdr2014_en.pdf.

⁸³ Columbia Center on Sustainable Investment. "Counterclaims in Investor-State Disputes." *Columbia Center on Sustainable Investment*, 28 Feb. 2020. <https://ccsi.columbia.edu/content/counterclaims-investor-state-disputes>.

companies may engage in so-called “treaty shopping” when making an investment.⁸⁴ Under this practice, an investor may incorporate an affiliate, or channel its investment through an affiliate, in a country that has a favorable bilateral investment treaty with the developing host country. In this manner, an oil company may seek to obtain treaty protections that would otherwise not be directly available to it, or protections that are more favorable than those available under the treaty between its home country and the host country.⁸⁵

Another risk is that, once these agreements are in place, they cannot necessarily be easily or readily modified or terminated. As agreements between states, their amendment requires the agreement of the contracting states, and withdrawal or termination is governed by the terms of the particular treaty. Moreover, many bilateral investment treaties contain so-called “sunset” or “survival” clauses under which investments made before termination continue to benefit from treaty protections for a specified period after the treaty has been terminated.⁸⁶ Depending on the particular treaty, these protections may continue for 10, 15, 20 or more years.⁸⁷ Consequently, even after a country terminates a BIT, qualifying investments made while the treaty was in force may remain protected, and investors may continue to have access to ISDS for the duration of the applicable survival period.

⁸⁴ De Stefano, Carlo. “How to Limit Treaty-Shopping.” *Columbia FDI Perspectives*, no. 258, Columbia Center on Sustainable Investment, 12 Aug. 2019. <https://ccsi.columbia.edu/wp-content/uploads/2020/04/No-258-de-Stefano-FINAL.pdf>.

⁸⁵ United Nations Conference on Trade and Development. *Investor-State Disputes Arising from Investment Treaties: A Review*. United Nations, 2006. <https://unctad.org/publication/investor-state-disputes-arising-investment-treaties-review>

⁸⁶ Columbia Center on Sustainable Investment. *Breaking Free: Strategies for Governments on Terminating Investment Treaties and Managing Sunset Clauses*. Columbia Center on Sustainable Investment, <https://ccsi.columbia.edu/sites/default/files/content/docs/publications/ccsi-breaking-free-investment-treaties.pdf>.

⁸⁷ Organisation for Economic Co-operation and Development. *OECD Investment Policy Reviews: Indonesia 2020*. OECD Publishing, 2020. https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/12/oecd-investment-policy-reviews-indonesia-2020_be45a0c6/b56512da-en.pdf.

Another risk is the infamous “fair and equitable treatment” (FET) provision contained in many BITs. Many BITs require a host state to provide foreign investors with fair and equitable treatment, yet there is no universally accepted definition of what “fair and equitable treatment” actually entails or means. International arbitral tribunals have interpreted this broadly, in fact very broadly, to encompass a number of protections, including, the vague protection of an investor’s “legitimate expectations.”⁸⁸ The difficulty is that there is likewise no universally accepted definition of what constitutes an investor’s legitimate expectations.⁸⁹ Investors have relied on this concept to challenge changes in a country’s laws, environment regulations, health regulations or governmental conduct that they claim frustrated the expectations, in particular the profits they expected, upon which they relied when making their investment.⁹⁰ It should be kept in mind that the companies generally have not disclosed or revealed their prospective return on investment (ROI) (as well as the assumptions and analysis on which the ROI was determined) on which they based their investment decision. The result is that a broadly drafted FET provision can potentially expose a state to claims arising from changes to its legal and regulatory framework, including, adoption, up-to-date environmental legislation, and, therefore, affect the state’s regulatory, including measures that are for the public interest and are key for a country’s sustainable development. For example, France and Namibia signed a bilateral investment treaty on 25 June 1998, which entered into force in 2006. The treaty requires Namibia to provide investments made

⁸⁸ Gaukrodger, David. “The Balance between Investor Protection and the Right to Regulate in Investment Treaties: A Scoping Paper.” *OECD Working Papers on International Investment*, no. 2017/02, OECD Publishing, 2017. https://www.oecd.org/content/dam/oecd/en/publications/reports/2017/02/the-balance-between-investor-protection-and-the-right-to-regulate-in-investment-treaties_03028151/82786801-en.pdf.

⁸⁹ M. Potesta, “Legitimate Expectations in Investment Treaty Law: Understanding the Roots and the Limits of a Controversial Concept,” *ICSID Review - Foreign Investment Law Journal* 28, no. 1 (February 27, 2013): 88–122, <https://doi.org/10.1093/icsidreview/sis034>.

⁹⁰ See for example, *Técnicas Medioambientales Tecmed, S.A. v. United Mexican States*, ICSID Case No. ARB(AF)/00/2, Award, 29 May 2003, para. 154. The tribunal stated that FET requires treatment that does not affect the “basic expectations that were taken into account by the foreign investor to make the investment.

by qualifying French investors with fair and equitable treatment. Accordingly, if a French oil and gas company invests in Namibia and Namibia subsequently enacts a new environmental law imposing requirements, and new costs, which did not exist when the investment was originally made, the French investor could seek to rely on the France–Namibia BIT to initiate an ISDS claim, which can impose substantial costs on Namibia.

Finally, a high risk is the cost of arbitration. ISDS has been criticized as being excessively costly

Oil and Gas Companies have Won Billions Through ISDS

Fossil fuel companies have received at least US\$82 billion through ISDS, which is equivalent to equivalent to the combined GDP of 45 of the world's poorest or smallest countries.

with legal fees normally in the millions, which have to be paid from the national budget of a country. Indeed, the average ISDS proceeding costs around \$13 million for the

investor and the host state combined, including tribunal costs.⁹¹ Furthermore, if a claim is successful, a host state can be liable for significant damages. The arbitration tribunal in the case *Chevron v. Republic of Ecuador (I)* for example awarded Chevron, an international oil company, over \$200 million in an arbitration claim against Ecuador.⁹² Research shows that ISDS has granted fossil fuel businesses, including oil companies, at least US\$82.8 billion over US\$74 billion in awards and close to US\$8.7 billion through settlement.⁹³ This is roughly equivalent to

⁹¹ Columbia Center on Sustainable Investment. *Primer on International Investment Treaties and Investor-State Dispute Settlement*. Columbia Center on Sustainable Investment. <https://ccsi.columbia.edu/primer-international-investment-treaties-and-investor-state-dispute-settlement/>. UNCTAD further reported that legal fees averaged approximately 60% of total costs, with respondent States incurring millions of dollars in legal costs in individual cases. See, United Nations Conference on Trade and Development. *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries*. United Nations, 2009. https://unctad.org/en/docs/diacia200911_en.pdf.

⁹² *Chevron Corporation and Texaco Petroleum Company v. Republic of Ecuador (I)*, PCA Case No. 2007-02/AA277, Final Award, 31 Aug. 2011, Permanent Court of Arbitration. <https://pca-cpa.org/en/cases/85/>.

⁹³ Di Salvatore, Lea, et al. “Investor–State Dispute Settlements: A Hidden Handbrake on Climate Action.” *IIED Briefing*, International Institute for Environment and Development and Columbia Center on Sustainable Investment, Nov. 2023, <https://iied.org/21971iied>. See also, “Exxon Nears Peak Impunity on Climate Obligations.” *Financial*

the gross domestic product of 45 of the world's poorest or smallest countries put together.⁹⁴

Moreover, BITs can be said to have a “chilling effect” on legislation development given the fear of costly litigation.⁹⁵

Ultimately, the risks posed by BITs extend beyond the financial consequences of individual investor-state claims. They may affect a state's sovereign ability to regulate the development of its natural resources in the public interest.⁹⁶ Treaty obligations may unduly constrain the state's ability to adapt its legal framework, protect the environment and local communities, or secure the long-term benefits of petroleum development.⁹⁷ This may result in preventing natural resource development to operate as an instrument of economic growth and instead contribute to conditions associated with the resource curse, which will be explained below.

How can a country balance investor protections and their expectations for a predictable legal system with its right to regulate the oil and gas sector?

Balancing these competing interests is particularly difficult for developing countries. Foreign investors, understandably, seek a predictable and stable legal environment. They will continue to rely on the protections afforded by existing BITs. At the same time, a country, as the owner of its

Times, 2026, www.ft.com/content/6afa0d5c-d252-4644-822f-44514576148e. Accessed 17 Aug. 2026 and Arthur Neslen, “Secretive Court System Has Awarded Over \$100bn Public Money to Corporations, Finds New Analysis,” *The Guardian*, Jun 2024 <https://www.theguardian.com/environment/article/2024/jun/06/investors-awarded-billions-of-dollars-for-losses-related-to-climate-laws-analysis-finds>.

⁹⁴ Di Salvatore, Lea, et al. “Investor–State Dispute Settlements: A Hidden Handbrake on Climate Action.” *IIED Briefing*, International Institute for Environment and Development and Columbia Center on Sustainable Investment, Nov. 2023, <https://iied.org/21971iied>.

⁹⁵ Moecklecke, Carolina. “The Chilling Effect of International Investment Disputes: Limited Challenges to State Sovereignty.” *International Studies Quarterly*, vol. 64, no. 1, Mar. 2020, pp. 1–12. Oxford Academic, . <https://doi.org/10.1093/isq/sqz077>.

⁹⁶ Coleman, Jesse, et. al. “International Investment Agreements, 2015–2016: A Review of Trends and New Approaches.” *Yearbook on International Investment Law & Policy 2015–2016*, Oxford University Press, 2018, pp. 42–92, at p. 72. <https://ccsi.columbia.edu/sites/ccsi.columbia.edu/files/content/docs/publications/YB-2015-16-Chapter-2-Sachs-et-al.pdf>.

⁹⁷ Ibid.

petroleum resources, must retain the ability to regulate the development of those resources in public interest.

The key, therefore, is twofold: first, in the future the state should negotiate more equitable bilateral investment treaties;⁹⁸ and second, with respect to treaties already in force, the state should take its existing treaty obligations into account when crafting its oil and gas framework and drafting petroleum agreements in order to safeguard a state's interests. The legal framework should clearly and explicitly stipulate what the country retains the right to undertake, including the enactment and amendment of environmental, health, labor, safety, cultural preservation and other laws and regulations. Such provisions will underscore from the outset that the state retains the right to adopt and amend these laws as circumstances, scientific knowledge, technology and public needs evolve, thereby reducing the risk that the exercise of legitimate regulatory authority may subsequently become the basis for an investment treaty claim. A developing nation should be able to protect its public interest to the same extent as, for example, member nations of the EU do.⁹⁹

A state should also consider measures designed to define, stipulate and clarify, from the outset, what an investor actually expected when making its investment. This may be particularly important given the ambiguity surrounding the concept of FET and the different approaches taken by arbitral tribunals in applying it. One approach would be to require an investor to disclose its expected return on investment (ROI), together with the principal assumptions and analysis upon which that

⁹⁸ Organisation for Economic Co-operation and Development. "'Fair' and 'Equitable' Treatment Provisions in Investment Treaties: A Large-Sample Survey of Treaty Provisions." OECD Working Papers on International Investment, no. 2023/01, OECD Publishing, 2023. https://www.oecd.org/en/publications/fair-and-equitable-treatment-provisions-in-investment-treaties_af86f128-en.html.

⁹⁹ Georgia Host Government Agreement, art. 7.2.x, 1999, retrieved from https://www.bp.com/content/dam/bp/country-sites/en_az/azerbaijan/home/pdfs/legalagreements/gov-agreements/btc_eng_agmt2_agmt2.pdf
[The agreement includes](#)

expected ROI is based, and to certify those assumptions at the time the investment is made.¹⁰⁰ Such disclosure could provide a contemporaneous record of the expectations and assumptions upon which the investor relied and, therefore, could assist the state in responding to any subsequent claim that a change in the legal or regulatory framework frustrated the investor's FET.

Not factoring into consideration the impact of BITS on policy and legislation may have the unintended consequence of fostering the resource curse of a country.

What exactly is the resource curse?

The resource curse has become a popularized concept or term to describe a socio-economic phenomenon or contradiction.¹⁰¹ It refers to countries which are natural resource rich, whether from minerals, oil or gas, but economically poor.¹⁰² Countless analyses have been made to determine the causes of this phenomenon; and the conclusions are always the same. These are countries that have mismanaged their natural resource endowment; permitted corruption to take hold and even to become rampant; witnessed environmental damage resulting from the exploitation of oil and gas and/or minerals;¹⁰³ suffered significant inflation; did not manage

¹⁰⁰ See, for example, Jonathan Bonnitcha, *The Problem of Moral Hazard and Its Implications for the Protection of 'Legitimate Expectations' under the Fair and Equitable Treatment Standard*, Investment Treaty News (2011) (discussing *Bau v. Thailand*, where the tribunal accepted an investor's expectation of a "reasonable rate of return" based on the investor's business plans at the time of investment)

See also, *Walter Bau AG (in liquidation) v. Kingdom of Thailand*, UNCITRAL, Award, 1 July 2009.

(The tribunal demonstrated that identifying an investor's expected return and the financial projection for that expectation is not unprecedented to the investment process, prior to entering into contract, project's financial implications or projections were made available to both parties, and the parties entered into agreement on the basis of a reasonable expected return. Although no particular return was guaranteed, the tribunal still treated a reasonable rate of return as part of the investor's legitimate expectations. This case particularly supports the transparency in the assumptions pertaining to expected ROI.)

¹⁰¹ Japhace Poncian, "Extractive Resource Ownership and the Subnational Resource Curse: Insights From Tanzania," *The Extractive Industries and Society* 6, no. 2 (September 7, 2018): 332–42, <https://doi.org/10.1016/j.exis.2018.08.013>

¹⁰² Bimal Chandra Roy, Satyaki Sarkar, and Nikhil Ranjan Mandal, "Natural Resource Abundance and Economic Performance—A Literature Review," *Current Urban Studies* 01, no. 04 (January 1, 2013): 148–55, <https://doi.org/10.4236/cus.2013.14016>.

¹⁰³ John Narh, "The Resource Curse and the Role of Institutions Revisited," *Environment Development and Sustainability* 27, no. 4 (December 20, 2023): 8187–8207, <https://doi.org/10.1007/s10668-023-04279-6>.

expectations which resulted in social unrest;¹⁰⁴ witnessed rising inequality¹⁰⁵; became overdependent on the natural resource development; did not diversify their economies¹⁰⁶; and more.¹⁰⁷ The core benign explanation is mismanagement in all its guises; and the core negative explanation is corruption. But unfortunately, the recommendations to prevent or overcome a resource curse are always in general terms. There is no clear, or detailed, road-map. So, for countries embarking on significant natural resource development, the challenge remains on how to prevent the occurrence of this unfortunate phenomenon. As a start, countries such as Namibia can learn from the experiences from other countries, although the concrete steps and actions that will have to be taken will have to be first adapted, after careful study and analysis, from the experiences of others and only thereafter adopted.

Countries that have suffered from the resource curse are on most continents and the list is long.¹⁰⁸ They include Equatorial Guinea, Congo (DRC) and Nigeria,¹⁰⁹ as well as nearly all other natural resource rich countries, in Africa; Peru and Venezuela in Latin America;¹¹⁰ Indonesia in Asia;¹¹¹

¹⁰⁴ Michael L. Ross, "What Have We Learned About the Resource Curse?," *Annual Review of Political Science* 18, no. 1 (December 23, 2014): 239–59, <https://doi.org/10.1146/annurev-polisci-052213-040359>.

¹⁰⁵ Ibid.

¹⁰⁶ Frederick Van Der Ploeg and Anthony J. Venables, "Natural Resource Wealth: The Challenge of Managing a Windfall," *Annual Review of Economics* 4, no. 1 (June 16, 2012): 315–37, <https://doi.org/10.1146/annurev-economics-080511-111003>;

Jeffrey Frankel, "The Natural Resource Curse: A Survey," *National Bureau of Economic Research*, March 1, 2010, <https://doi.org/10.3386/w15836>.

¹⁰⁷ Frederick Van Der Ploeg, "Natural Resources: Curse or Blessing?," *Journal of Economic Literature* 49, no. 2 (June 1, 2011): 366–420, <https://doi.org/10.1257/jel.49.2.366>.

¹⁰⁸ Jeffrey Frankel, "Chapter 2. The Natural Resource Curse: A Survey of Diagnoses and Some Prescriptions," in *Commodity Price Volatility and Inclusive Growth in Low-Income Countries*, 2012, <https://doi.org/10.5089/9781616353797.071.ch002>.

¹⁰⁹ Hazel M McFerson, "Governance and Hyper-corruption in Resource-rich African Countries," *Third World Quarterly* 30, no. 8 (December 1, 2009): 1529–47, <https://doi.org/10.1080/01436590903279257>.

¹¹⁰ Nathalie Pouokam, *Sharing Resource Wealth Inclusively Within and Across Generations* (International Monetary Fund, 2021).

¹¹¹ Rian Hilmawan and Jeremy Clark, "An Investigation of the Resource Curse in Indonesia," *Resources Policy* 64 (September 6, 2019): 101483, <https://doi.org/10.1016/j.resourpol.2019.101483>.

and Nauru, now Naoero, in the Pacific.¹¹² The development of these countries is the stories of what can and does go wrong. And, as noted, research has not given any receipt or specific answers on how the resource curse could have been avoided.

Countries that have been endowed with natural resource riches and have been successful in avoiding the resource curse include Australia, Canada, Chile, Norway and US.¹¹³ It also includes Botswana, a natural resource success story in Africa,¹¹⁴ which has a unique story and history. And there are countries in-between such as Brazil. What lessons can be learned from these successful countries?

Each had an established and tested socio-economic system founded and built on a reliable and trusted legal system (even if not perfect), a functioning civil service, educated populace, and checks-and-balance governance.¹¹⁵ So, the natural question which arises is how can an emerging natural resource rich country develop and duplicate such characteristics, assuming that it does not already have such a solid foundation. The answer is found in the adage “to go slow is to go fast.”¹¹⁶ This means deliberation, planning, and going step-by-step, which by-definition, requires taking time, all with the goal of avoiding costly mistakes getting it right. Admittedly, given the pressures of modern-day instant news, the pressures for elected officials to show results, immediate results, especially when the lure of the potential of the development natural resource riches is already well

¹¹² John Connell, “Nauru: The First Failed Pacific State?,” *The Round Table* 95, no. 383 (January 1, 2006): 47–63, <https://doi.org/10.1080/00358530500379205>;

Nancy J. Pollock, “Nauru Phosphate History and the Resource Curse Narrative,” *Journal De La Société Des Océanistes* 138–139 (January 1, 2014): 107–20, <https://doi.org/10.4000/jso.7055>.

¹¹³ Daban, S. (2013). Public Financial Management In Natural Resource-Rich Countries. In M. Cangiano, Teresa Curristine, and Michel Lazare (Eds.), *Public Financial Management and Its Emerging Architecture*, 2013, <https://doi.org/10.5089/9781475531091.071>.

¹¹⁴ Halvor Mehlum, Karl Moene, and Ragnar Torvik, “Institutions and the Resource Curse,” *The Economic Journal*. Volume 116, Issue no. 508 (January 1, 2006): 1–20, <https://doi.org/10.1111/j.1468-0297.2006.01045.x>.

¹¹⁵ Ibid.;

Atsushi Iimi, *Did Botswana Escape From the Resource Curse?* (International Monetary Fund, 2006).

¹¹⁶ Jenik Radon, “You Have to Go Slow in Order to Go Fast,” interview, *Oil in Uganda*, October 31, 2012, originally published by *Oil in Uganda*, retrieved from RSSing, <https://uganda319.rssing.com/chan-11369088/article3.html>

publicized, managing public and official expectations is a significant challenge.¹¹⁷ Still, some steps can be taken that can ameliorate the pressures of this challenge.

What steps can and need to be taken to ameliorate the pressures of expectations lured by the expected riches of natural resource development?

The example of Botswana is particularly instructive. Botswana stands out as it did not have the established history, institutional structures or historical tried governance system comparable to such developed countries as Australia, Canada or Norway. At independence in 1966, Botswana was a poor country.¹¹⁸ It first had to create, build and maintain its own governing institutions and structures.¹¹⁹ Fortunately, it did not completely reject its colonial structures.¹²⁰ It effectively kept them in place, adapted them and then steadily adopted its own.¹²¹ Also, it kept many of the colonial civil service personnel in place while also training and educating its own. It is said that it took Botswana two to three decades to build an effective bureaucracy.¹²² And, Botswana's deliberate and patient approach succeeded.

¹¹⁷ Elissaios Papyrakis and Osiris Jorge Parcero, "The Psychology of Mineral Wealth: Empirical Evidence From Kazakhstan," *Resources Policy* 77 (April 11, 2022): 102706, <https://doi.org/10.1016/j.resourpol.2022.102706>; Jędrzej George Frynas, Geoffrey Wood, and Timothy Hinks, "The Resource Curse Without Natural Resources: Expectations of Resource Booms and Their Impact," *African Affairs*, January 30, 2017, 1–28, <https://doi.org/10.1093/afraf/adx001>; International Monetary Fund. Research Dept, *IMF Staff Papers, Volume 57, No. 1* (International Monetary Fund, 2010).

¹¹⁸ Monageng Mogalakwe and Francis Nyamnjoh, "Botswana at 50: Democratic Deficit, Elite Corruption and Poverty in the Midst of Plenty," *Journal of Contemporary African Studies* 35, no. 1 (January 2, 2017): 1–14, <https://doi.org/10.1080/02589001.2017.1286636>

¹¹⁹ Valentin Seidler, "Why Did Botswana End up With Good Institutions: The Role of Culture and Colonial Rule.," *SSRN Electronic Journal*, January 1, 2010, <https://doi.org/10.2139/ssrn.3051011>.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² Adamolekun, Ladipo, Armand E. Atomate, and Guy A. de Lusignan, editors. *Civil Service Reform in Francophone Africa: Proceedings of a Workshop, Abidjan, January 23–26, 1996*. World Bank, 1997. *World Bank Technical Paper*, no. 357, Africa Region Series. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/795991468227709373>. Amy R. Poteete, "Ideas, Interests, and Institutions: Challenging the Property Rights Paradigm in Botswana," *Governance* 16, no. 4 (September 17, 2003): 527–57, <https://doi.org/10.1111/1468-0491.00227>.

Moreover, Botswana has effectively used proceeds earned from its diamond industry to provide budget support with a focus on necessary financing/investing in fundamentals, namely education, health, welfare and infrastructure, which are the cornerstones that support growth.¹²³ This gave the public visual and concrete evidence that development was occurring and that they were gaining/sharing from Botswana’s development of its diamond fields. This helped create trust in the government, and helped keep social peace, which requires transparency and evidence that promises are kept.¹²⁴

Furthermore, as Botswana’s economy steadily grew, it was able to establish the Pula Fund in 1994, its own sovereign

Botswana: Build Capacity, Deliver Today and Invest for Tomorrow

Botswana took two to three decades to build an effective bureaucracy, retaining experienced civil servants while training its own. It invested diamond revenues in education, health, welfare and infrastructure, giving citizens tangible evidence that they were sharing in the country’s resource wealth.

wealth fund.¹²⁵ This fund was designed to invest the export earnings from its non-renewable sources, namely diamonds, and preserve (and grow) these earnings for the next, the future, generations. The Pula Fund was governed by the Bank of Botswana, its central bank, which had at its primary responsibility to maintain the country’s monetary and financial stability, a responsibility common to all central banks. Its governance of the Pula Fund could be said to be a

¹²³ Keith Jefferis, “Management of Botswana’s Diamond Revenues,” IMF Public Financial Management, July 8, 2024. <https://blog-pfm.imf.org/en/pfimblog/2024/07/management-of-botswana-diamond-revenues>; Bénédicte de la Brière, Deon P. Filmer, Dena Ringold, Dominic Patrick Rohner, Karelle Ann Yakini Samuda, and Anastasiya Denisova, *From Mines and Wells to Well-Built Minds: Turning Sub-Saharan Africa’s Natural Resource Wealth into Human Capital* (Washington, DC: World Bank Group, May 2017), <http://documents.worldbank.org/curated/en/687681493880957794>.

¹²⁴ Jenik Radon, “Keeping Your Promises: Social License to Operate,” in *Walk Tall! A Beautiful Tomorrow for Emerging Nations: an Anthology of Inclusive Principles for National Growth and Prosperity : Equity, Rule of Law and Sustainable Natural Resource Development*, 2018., chapter 29.

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¹²⁵ “Pula Fund | Bank of Botswana,” n.d., <https://bankofbotswana.bw/index.php/content/pula-fund>.

natural and logical extension of its primary responsibility.¹²⁶ Prior to the creation of its fund in 1994, Botswana followed strict budgeting, which, as noted, focused on supporting and investing in the aforementioned fundamentals.¹²⁷ What made Botswana successful has been called an “African Miracle” by Professor Samatar, Abdi Ismail.¹²⁸ That miracle was man-made as Botswana had excellent leadership for decades after independence. However, there is still no known formula on how to create or duplicate such leadership.

Canada/Alberta, Norway and Chile have also demonstrated that having the appropriate structures/institutions in place can be a stabilizing and reliable force that permits and promotes growth. Each of these countries have sovereign wealth funds which are independently governed according to strict rules, as set forth in legislation, which, admittedly can be changed or modified, again by legislation, (or controlling institution) as the ultimate owner of these funds is the state.¹²⁹ The adoption by the legislatures of governing laws and regulations for these funds, which mandate and permit independent operations, lessens the potential of political interference.

Although there is no universal pattern on who the governing or supervisory authority of these funds is or should be, it is not unusual to have the central bank or a country’s finance ministry be the responsible authority.¹³⁰ These institutions, as they regularly engage and interact with foreign

¹²⁶ Ibid.

¹²⁷ International Monetary Fund, *Botswana: Background Papers and Statistical Appendix* (International Monetary Fund, 1995). <https://doi.org/10.5089/9781451806304.002>

¹²⁸ Abdi Ismail Samatar, *An African Miracle: State and Class Leadership and Colonial Legacy in Botswana Development* (Heinemann Educational Books, 1999).

¹²⁹ “Alberta Heritage Savings Trust Fund Act - Open Government,” n.d., <https://open.alberta.ca/publications/a23>.; International Monetary Fund. European Dept. “Norway: Selected Issues”, IMF Staff Country Reports 2025, 249 (2025), Article A001, A001, <https://doi.org/10.5089/9798229022835.002.A001>; International Monetary Fund. Fiscal Affairs Dept. “Chile: Technical Assistance Report-Fiscal Considerations in Managing Stabilization Funds”, IMF Staff Country Reports 2023, 249 (2023), Article A001, A001, <https://doi.org/10.5089/9798400249037.002.A001>.

¹³⁰ Ibid.

Al-Hassan, Abdullah, Michael G. Papaioannou, Martin Skancke, and Cheng Chih Sung. “Sovereign Wealth Funds: Aspects of Governance Structures and Investment Management”, IMF Working Papers 2013, 231 (2013), Article A001, A001, <https://doi.org/10.5089/9781475518610.001.A001>

banks and international financial institutions, which means they are subject to international scrutiny,¹³¹ have been able to develop professional staffs to implement their core responsibility, namely the financial and monetary stability of a country.

Each country is different, and there is no one-size-fits-all approach. Nevertheless, these examples demonstrate and underscore the importance of strong institutions, a professional civil service, and a well-governed sovereign wealth fund. The sovereign wealth fund must be managed or supervised by an established institution such as the central bank or finance ministry, to ensure the prudent and independent management of resource revenues and limit political interference.

In utilizing the earnings from natural resource development, are there any caveats, any principles, that need to be considered and taken into account?

One concept which is frequently overlooked is that the taxation of oil and gas projects, as well as the receipt of the profits from such projects, is not the same as the taxation, or the operating, of normal business activities, whether a grocery store, a manufacturing company or a professional service firm.¹³² The reason is that all, and it is necessary to underscore the concept of all, earnings from the development of a country's natural resources, whether from mining or oil and gas, is really the conversion of one asset into another.¹³³ But it is a unique asset. It is a permanent and finite asset. Its conversion changes its nature, its permanency, into a liquid asset, effectively cash or cash equivalent, which is also more volatile and not permanent. By analogy, the conversion

¹³¹ Kemme, David M. 2026. "The Sovereign Wealth Fund Paradox: Evolution, Challenges, and Unresolved Issues" *Journal of Risk and Financial Management* 19, no. 2: 119. <https://doi.org/10.3390/jrfm19020119>

¹³² Boadway, Robin & Flatters, Frank, 1993. "The taxation of natural resources : principles and policy issues," *Policy Research Working Paper Series* 1210, The World Bank.

¹³³ Duanjie Chen and Jack Mintz, "Capturing Economic Rents from Resources through Royalties and Taxes," *The School of Public Policy Publications* 5, no. 1 (2012), <https://doi.org/10.55016/ojs/sppp.v5i1.42400>; Julien Daubanes and Silvia Andrade de Sá, "Taxing the Rent of Non-Renewable Resource Sectors: A Theoretical Note," *OECD Economics Department Working Papers*, no. 1149 (Paris: OECD Publishing, 2014), <https://doi.org/10.1787/5jz0zb620vr1-en>.

needs to be viewed as similar to the “sale” of a family’s heirloom. Once it is sold, it cannot be brought back, cannot be replaced, and certainly cannot be preserved for future generations. Therefore, the proceeds from natural resources need to be invested wisely, and, to the maximum extent possible, preserved and grown. Accordingly, all the earnings from oil and gas projects should (ideally) first be deposited in a separate dedicated account, and, thereafter, in accordance with strict regulations, certain limited amounts should be allocated for prescribed purposes for the budget for productive purposes such as education, health and infrastructure.¹³⁴

Moreover, as already mentioned above, most of the earnings should be saved or invested for the future, as is done in Norway and other countries with sovereign wealth funds, many of which voluntarily meet the standards set by Santiago Principles.¹³⁵ These earnings are not normal or standard income tax proceeds, or standard business profits, which means they need to be managed differently, managed for the present as well as the future. It is not an overstatement to say they should be cherished as a country’s living heirloom.

What does it take to establish the appropriate government structures, including independent institutions? — need to think out of the box

There are, as already noted, many examples of countries which have suffered from the resource curse, many of which were previously ranked as developing or poor countries. One common observation is that they have failed to establish, develop, and maintain appropriate effective institutions, which are the backbone of any functioning governance system. Accordingly, one needs to learn from countries that succeeded in building solid institutions, as well as countries that

¹³⁴ International Monetary Fund, “Ghana,” *IMF Staff Country Reports* 2012, no. 036 (February 1, 2012), 1, <https://doi.org/10.5089/9781463941048.002>

¹³⁵ “Santiago Principles | IFSWF,” n.d. <https://www.ifswf.org/santiago-principles-landing/santiago-principles>.

already had established institutions. Ironically, other than Botswana, many countries which have succeeded in developing their countries are not natural resource rich countries. Nevertheless, they offer instructive learning lessons, admittedly by analogy.

What is required is political will, an openness to learn from other countries, a willingness to emulate, and also a capability to understand, appreciate and accept that development does not occur overnight. Furthermore, political will require a national consensus, a shared vision.¹³⁶ It also demands openness and transparency.¹³⁷ Still, how to first create and then maintain political will is a challenge, a challenge without ready or model answers. There is no known formula, but there are some common features that can be guided in crafting and devising steps forward.

To build the right institutions, the right structures, with a trained and professional civil service, takes time, which, in turn, requires patience, political as well as social patience, and diligence. It took the famed Tiger Leap countries of Asia, including Singapore, Taiwan and South Korea, none of which were or are natural resources rich countries, several decades to achieve developed status.¹³⁸ Estonia, today famed as a digital powerhouse and recognized as one of the Baltic Tigers¹³⁹ along with Latvia and Lithuania, also took several decades to attain such success. While

¹³⁶ For example, the Baltics independence movements provide a practical example of the national consensus towards a shared vision despite their differences. Although Estonia, Latvia, Lithuania, and the political movements within them had differed in their approaches to independence, they were still able to unite around the overall goal of independence and had demonstrated the strength of a shared political will and common national purpose. It is important to understand that consensus does not mean that everyone agrees on everything, but it means that a common objective can be identified and the political will can be coordinated towards it.

¹³⁷ World Bank, *Making Politics Work for Development: Harnessing Transparency and Citizen Engagement* (Washington, DC: World Bank, 2016), <https://hdl.handle.net/10986/24461>

¹³⁸ Yue, Chia Siow. "Going Beyond Comparative Advantage: How Singapore Did It." *Breaking the Oil Spell: The Gulf Falcons' Path to Diversification*, edited by Reda Cherif, Fuad Hasanov, and Min Zhu, International Monetary Fund, 2016. <https://www.elibrary.imf.org/display/book/9781513537863/ch004.xml>.

¹³⁹ Nathan Heller, "Estonia, The Digital Republic," *The New Yorker*, December 11, 2017, <https://www.newyorker.com/magazine/2017/12/18/estonia-the-digital-republic>; Mathis Bitton, "The Estonian Miracle: E-Estonia And The Future of Digital Infrastructure," NYU School of Professional Studies, April 1, 2025, <https://www.sps.nyu.edu/about/news-and-ideas/articles/etc/2024/the-estonian-miracle-e-estonia-and-the-future-of-digital-infrastructure.html>.

these countries are praised for their economic leap, the use of the word leap misdescribes what actually occurred. The economic development of these countries was not a leap. Instead, these countries followed, admittedly unknowingly, what I describe as, and have coined as, the “turtle theory of development”: slow, steady, deliberate, diligent, patient and consistent work to achieve economic growth. This, as I have personally learned and discovered, is the application and melding of concepts of human psychology to economic and social theory. But the analogy can only go so far as turtles live according to their own nature and do not have a vision of the future. The Tiger Leap countries, as well as Estonia, all had a vision, namely, to modernize their countries and bring prosperity to their people.

Even if there is no magic formula, what are lessons that can be learned, even followed, from successful countries?

The lesson of Estonia is particularly instructive. When Estonia regained its independence from the Soviet Union in 1991 after decades of occupation, it was a poor country without sufficient funds to even pay for gas to heat its homes.¹⁴⁰ But it did have a relatively well-educated population and excellent school teachers.¹⁴¹ The society valued education.¹⁴² Moreover, Estonia immediately

Columbia University School of International and Public Affairs. Capstone Report, 2019, “*Estonia, A Global Leader: Amplifying Small States' Voices*.” Faculty advisor Jenik Radon. <https://www.sipa.columbia.edu/estonia-global-leader-amplifying-small-states-voices>.

¹⁴⁰ Amedeo Gasparini, “From State to Market: Thirty Years of Economic Success in Estonia,” *Friedrich Naumann Foundation for Freedom*, June 8, 2021, <https://www.freiheit.org/central-europe-and-baltic-states/state-market-thirty-years-economic-success-estonia>;

Violaine Champetier de Ribes, “Former President Ilves: Estonia’s Entrepreneurial Culture Comes from Hunger for Success,” *Estonian World*, August 20, 2021, <https://estonianworld.com/technology/former-president-ilves-estonias-entrepreneurial-culture-comes-from-a-hunger-for-success/>.

¹⁴¹ Geoff Masters, “How Estonia is Building a World-Class Learning System,” World-Class Learning Systems, May 26, 2024, <https://worldclasslearningsystems.com/how-estonia-is-building-a-world-class-learning-system/>; “Estonia’s Education Success: The School Model Behind It,” Education Estonia, January 15, 2026, <https://www.educationestonia.org/estonian-school-model/>.

¹⁴² Maria Jürimäe, “Insights From The Education Nation: The Case of Estonia,” *Green European Journal*, June 14, 2022, <https://www.greeneuropeanjournal.eu/insights-from-the-education-nation-the-case-of-estonia/>.

sought to create a civil service that could meet EU standards.¹⁴³ Accordingly, it invited trainers from the EU, as well as the United States, to train its new and young civil servants.¹⁴⁴ It also created a public administration school.¹⁴⁵ The results of such training took a decade plus to achieve the desired standards. What Estonia effectively did is focus on the basics: education and civil service, fully understanding a solid civil service is the backbone of all public institutions. And fast forward to today, to ensure that public institutions can work effectively and efficiently, digitalization is necessary – it needs to be the goal. And Estonia has successfully digitized its institutions.¹⁴⁶

Moreover, Estonia is recognized today as a digital powerhouse – a country that punches above its weight,¹⁴⁷ just three decades after being described as poor. Estonia continues to look forward to the future and is already eyeing celebrating in 2418 the 500th anniversary of its independence as shown in this Tallinn city plaque picture.



Besides training a civil service, and establishing the institutions, does natural resource development pose any particular or special governance or operational challenges?

Oil and gas development in emerging or developing countries has a particular challenge. Oil and gas development is highly complex and can only be effectively undertaken by a country through the management of multiple disciplines: technical, financial, environmental, health, legal,

¹⁴³ Silver Tambur, “Estonia’s Decision of The Decade: Joining The EU,” Estonian World, May 1, 2019, <https://estonianworld.com/opinion/estonias-decision-of-the-decade-joining-the-eu/>;

¹⁴⁴ Margus Kolga, “Outreach Policy: A Moral Obligation or a Higher Calling?”, International Centre for Defence and Security, September 4, 2008, <https://icds.ee/en/outreach-policy-a-moral-obligation-or-a-higher-calling/>

¹⁴⁵ Estonian School of Diplomacy, “History,” <https://edk.edu.ee/about-us/history/>;

¹⁴⁶ E-Estonia, “We Have Built A Digital Society And We Can Show You How,” <https://e-estonia.com>

¹⁴⁷ Capstone Report, 2019. Estonia, A Global Leader: Amplifying Small States' Voices.

the management of multiple disciplines: technical, financial, environmental, health, legal, accounting, tax, labor, social and political. Accordingly, the various state institutions, the ministries and agencies, each of which have their capabilities, including specializations, and responsibilities, need to communicate, engage and coordinate with each other, as well as being transparent and open with its citizens.¹⁴⁸ It is a sharing of information, expertise and (joint) decision making.¹⁴⁹ The latter issue is of particular significance as economic growth must be balanced with health, environment, and community concerns and issues. For example, an agency which approves a project may well be reluctant or hesitant to declare an approved project in violation of the terms of a license or agreement, let alone to cancel it, for the simple, human, reason that it reflects poorly on its original approval decision. Also, a finance ministry may be willing to overlook an environmental violation so that production is not stopped, and earnings from oil and gas continue to provide budget funds without interruption. To ensure the best or optimal outcome for a country, and to counter such inherent conflicts¹⁵⁰, an institutional system of checks and balances for the approval, overseeing/supervising and enforcement of the oil and gas sector/industry is necessary.¹⁵¹

¹⁴⁸ Rodrigo Serrano, *What Makes Inter-Agency Coordination Work? Insights from the Literature and Two Case Studies*, ed. José Brakarz (Washington, DC: Inter-American Development Bank, August 2003).

¹⁴⁹ Ibid.

¹⁵⁰ Jenik Radon, “Resolving Conflicts of Interest in State-owned Enterprises,” in *Walk Tall! A Beautiful Tomorrow for Emerging Nations: an Anthology of Inclusive Principles for National Growth and Prosperity : Equity, Rule of Law and Sustainable Natural Resource Development*, 2018., chapter 28.

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This article was co-authored with Julius Thaler.

¹⁵¹ Ministry of Labour and Social Affairs, *Meld. St. 12 (2017–2018): Health, Safety and Environment in the Petroleum Industry*, Report to the Storting (White Paper), 2018, <https://www.regjeringen.no/en/documents/meld.-st.-12-20172018/id2595598/>;

Norwegian Offshore Directorate, “State Organisation of Petroleum Activities,” *Norwegianpetroleum.no*, November 14, 2025, <https://www.norskipetroleum.no/en/framework/state-organisation-of-petroleum-activities/> Norway demonstrates this approach in practice as its petroleum governance system deliberately separates resource management, licensing, safety supervision, environmental regulation and taxation among different institutions, with the government expressly identifying a “clear division of responsibility and roles” between the authorities.;

What does institutional checks and balances mean?

The goal of a checks and balance institutional/governance system is to prevent unitary decision making where one institution has commanding or overriding power. Checks and balance are not just a limitation of the powers of any single institution, but it also provides insurance that all concerns, interests, and expertise are considered.¹⁵² Ideally, this means, for example, that one agency should be responsible for the issuance of the exploration and exploitation license, in short approving the technical, logistics and financial capability of a project and its investors; another should be responsible for ensuring that the financial terms are fair and acceptable; another should be responsible for issuing and enforcing the environmental license; another should be responsible for issuing and enforcing the labor license; another should be responsible for issuing and enforcing the health license; and another for enforcing the general terms of the license or agreement. Each such institution would have its separate competence and would have its independent or separate decision-making responsibility. Admittedly, there will still have to be political decision-making, to balance the different responsibilities, to achieve the common good.

Columbia University School of International and Public Affairs. Capstone Report, “Oil: Uganda’s Opportunity for Prosperity.” Advised by faculty advisor Jenik Radon. Spring 2012 <https://www.sipa.columbia.edu/oil-ugandas-opportunity-prosperity>

¹⁵² International Monetary Fund. *Administering Fiscal Regimes for Extractive Industries: A Handbook*. International Monetary Fund, 2014, ch. 5, “Governance and Transparency.” <https://www.elibrary.imf.org/display/book/9781475575170/ch005.xml>.

As an aside, too often the ministry of energy or natural resources which is responsible for issuing the project operating license also is responsible for a conflicting responsibility, the issuing of the environmental license, which typically results in oil and gas operations and production being prioritized over the environment.¹⁵³

What is a good example of a country having an effective checks and balances oil and gas governance system?

Norway's oil and gas governance system, as described in table 1 and table 2 below, offers a model

Checks and Balances An institutional system of checks and balances is necessary for the approval, oversight, supervision and enforcement of the oil and gas sector.
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which can be adapted – nothing can or should simply be copied - and then adopted. While its Ministry of Energy has the authority to approve

and issue licenses for oil projects, it also has the power to cancel such licenses for a violation of the applicable license conditions or requirements. This dual power to both issue a license and to cancel it can be viewed as a structural conflict as there may be reputational concerns, even unconscious, or political pressures, in making a decision about whether to cancel a license which the Ministry has previously approved. However, in the case of Norway, with its strong legal tradition and system, the decisions of the Ministry are subject to effective judicial review as shown

¹⁵³ See, La'o Hamutuk. "11-05 Dependency/Regime." *La'o Hamutuk*, Nov. 2005.

<https://www.laohamutuk.org/OilWeb/LHpubs/LHB6-4.html>. .

The example of Timor-Leste is particularly significant in this case because the Petroleum Ministry had responsibility for promoting and developing petroleum projects while at the same time, also approving environmental proposals, decommissioning and clean up. Therefore, this arrangement creates a built-in institutional conflict of interest because the same authority responsible for promoting petroleum development is also responsible for protecting the environment from the consequences of such development. Consequences, which as evidenced from plenty of literature and practical examples, are inevitable.

by the 2024 decision of the District Court of Oslo in the *North Sea Fields Case*.¹⁵⁴ Moreover, the Norwegian Ocean Industry Authority (Havtil) can issue stop-work orders for safety and environmental violations, although it cannot cancel a license. While the Norwegian system does not have a perfect division of competencies, responsibilities and authority, it has an effective checks and balance system given that it has a strong judicial system.

Table 1: Approving Issuing and Licenses

Agency	Function
Ministry of Energy (KLD/ED)	Approves production and exploration licenses.
Norwegian Offshore Directorate (NOD)	Primary advisory and administrative body for the Ministry
Other Consultation Bodies	Ministry of Trade, Industry and Fisheries and the Ministry of Climate and Environment are consulted during the licensing process

¹⁵⁴ Oslo District Court, *Greenpeace Nordic and Nature & Youth v. Energy Ministry (The North Sea Fields Case)*, case no. 23-099330TVI-TOSL/05, 18 January 2024.

Table 2: Enforcing Rules and Canceling for Violations

Agency	Function
Ministry of Energy (KLD/ED)	Has the power to revoke or cancel license
Norwegian Ocean Industry Authority (Havtil)	Has the right to cancel a work order
Norwegian Environment Agency	Enforces environmental laws and regulation

For developing nations without a long-established legal system, a clearer division of institutional rights and responsibilities should be established.¹⁵⁵ In particular, there should be different and separate competent agencies to issue and cancel licenses. The ministry of energy, for example, should not be empowered, to overrule a decision of the ministry of environment or health. A national or state oil company, for example, should not simultaneously act as a commercial participant in the petroleum sector and also exercise the state's authority to award petroleum rights or regulate its competitors.¹⁵⁶

The reasons for being more explicit in establishing the competencies of different agencies and ministries in a developing country are many, not just the lack of a reliable legal system. Political,

¹⁵⁵ Peter D. Cameron and Michael C. Stanley, *Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries* (Washington, DC: World Bank, 2017), <https://documents1.worldbank.org/curated/en/222451496911224999/pdf/Oil-Gas-and-Mining-A-Sourcebook-for-Understanding-the-Extractive-Industries.pdf>

¹⁵⁶ Colombia illustrates this institutional separation: Ecopetrol operates as the national oil company and commercial participant in the petroleum sector, while the Agencia Nacional de Hidrocarburos (ANH) is responsible for administering the State's hydrocarbon resources and awarding rights for their exploration and production. Colombia, Presidencia de la República. Decreto 1760 de 2003, 26 June 2003, arts. 1–5, 34–35, *Diario Oficial* No. 45.230, 26 June 2003. <https://www.suin-juriscol.gov.co/viewDocument.asp?ruta=Decretos%2F1345942>.

institutional, societal and personal pressures are greater on government decision makers in developing countries, especially as there is an understandable concern that the government may lose income if a license is cancelled or there is a work stoppage as it is more dependent on the income from the oil industry. As mentioned above, there may also be a fear of a lawsuit under the applicable ISDS system, which would be costly; there may be worried about adverse publicity on the agency or ministry. There may be a question as to the country's openness to foreign investment, and the list goes on. In a way, it can be said that the concerns are endless.

As a consequence, independent agencies (especially the environment and health agencies) ideally free from political pressure and influence, should have the authority to enforce license obligations and requirements.¹⁵⁷ An underlying reason to create such an agency is to ensure that not just short term (political) goals are achieved, but also that long-term objectives are considered and also achieved, especially considering that the natural resource belongs to the present and the future generations and a clean environment belongs to all. Moreover, in line with what was already mentioned in the preceding sections, enforcement of laws and regulations creates, establishes and supports a reliable and trustworthy legal and political system, which will be attractive to foreign investors.

Given the complexity of oil and gas development, and the extensive number of issues to be addressed, what is the path forward?

As we live in a digitized world with AI having an ever-greater impact, I consulted AI for advice to answer this challenging question. It did not, however, provide any shorthand succinct or practical

¹⁵⁷ Ibid.

implementable advice. Advice was not what it gave. Instead, AI just gave me a long laundry list of issues to address which are set forth below:

“To develop oil and gas sustainably, a government must balance economic growth with environmental protection, social equity, and long-term energy transition goals.

Key Advice Issues

- **Regulatory framework:** Strong environmental laws prevent pollution.
- **Carbon management:** Mandating carbon capture reduces net emissions.
- **Methane reduction:** Ban routine flaring and repair leaks.
- **Economic diversification:** Reinvest oil revenues into green tech.
- **Social equity:** Protect and compensate local communities fairly.
- **Decommissioning funds:** Require upfront bonds for site cleanup.

Comprehensive Sustainable Development Framework

1. Environmental Stewardship and Emission Control

- **Enforce Zero Routine Flaring:** Direct operators to capture and commercialize associated gas instead of burning it.
- **Implement Strict Methane Detection:** Mandate regular Leak Detection and Repair (LDAR) programs using satellites and drones.
- **Require Carbon Capture:** Tie new production licenses to the deployment of Carbon Capture, Utilization, and Storage (CCUS) technologies.
- **Protect Biodiversity:** Restrict drilling in ecologically sensitive areas and enforce strict marine and terrestrial habitat restoration.

2. Fiscal Discipline and Economic Diversification

- **Establish a Sovereign Wealth Fund:** Save a significant portion of resource revenues for future generations to avoid "Dutch Disease" (currency overvaluation that hurts other sectors).
- **Fund the Energy Transition:** Direct oil and gas taxes specifically into renewable energy infrastructure, grid modernization, and clean-tech research.
- **Eliminate Fossil Fuel Subsidies:** Phase out domestic consumption subsidies to encourage energy efficiency, while using targeted cash transfers to protect vulnerable citizens.

3. Governance, Transparency, and Accountability

- **Join International Standards:** Adhere to frameworks like the Extractive Industries Transparency Initiative (EITI) to publicly disclose contracts, licenses, and revenues.
- **Independent Regulation:** Separate the government body that manages commercial oil operations (the national oil company) from the body that enforces environmental and safety laws.
- **Combat Corruption:** Implement open, competitive bidding processes for blocks rather than closed-door negotiations.

4. Social Responsibility and Local Content

- **Free, Prior, and Informed Consent:** Engage local and indigenous communities before exploration begins to protect their rights and lands.
- **Promote High-Value Local Content:** Focus local laws on building engineering, tech, and management skills within the domestic workforce, rather than just low-skilled labor.
- **Invest in Local Infrastructure:** Ensure extraction regions receive direct benefits, including clean water, healthcare, and schools funded by project revenues.

5. Future-Proofing and Asset Management

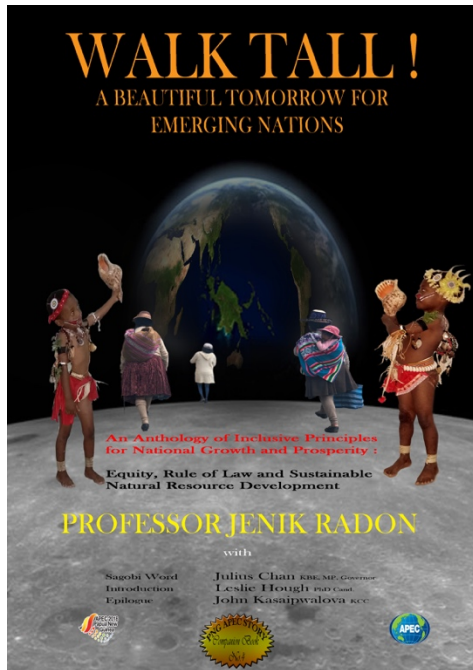
- **Secure Decommissioning Bonds:** Obligate companies to place funds in a secure escrow account during production so that well plugging and environmental cleanup are fully funded before abandonment.
- **Assess Stranded Asset Risks:** Factor global declining oil demand into long-term economic planning to avoid over-investing in infrastructure that may become economically unviable.”**

***This content is AI generated and is only for illustrative purposes.*

As AI was of no help, I can only confirm what I have previously noted. Deliberation, analysis, judgment, and decision-making remain necessary and indispensable. So, apply the “turtle theory of development”: repeat it and create a team, a coordinating agency, institution, to oversee and supervise the entire process of national oil and gas development, so that Namibia can grow and prosper. Admittedly, creating a team and a robust coordination institution is a challenge and requires continuous hard work, time, exercise of judgement, and political consensus.

President Nujoma anticipated this challenge: “*the destiny of [Namibia] is now fully in [its] own hands.*” I believe that given the opportunity that recent oil and gas discovery presents, even during this period of energy transition, Namibia can and will answer President Nujoma’s challenge and also realize my dream and hope for Namibia that by 2050 Namibia will be ranked, along with Singapore and Estonia, as a dynamic small tiger of the world,¹⁵⁸ a country acclaimed

¹⁵⁸ Jenik Radon. “Namibia as the Singapore of Southern Africa.” SANEC, 2015
<https://www.sanec.org/news-publications/latest-news/namibia-as-the-singapore-of-southern-africa/161>.



for its success, its prosperity and its dynamism.¹⁵⁹ By 2050, Namibia can and will enjoy a beautiful tomorrow, and the words of President Hage Geingob will then ring true: “No Namibian shall Feel Left Out.”¹⁶⁰ Namibia will Walk Tall!¹⁶¹

¹⁵⁹ Jenik Radon, “Namibia- The Success Story Few Have Heard About and a Future Gateway to Southern Africa,” in *Gateway to Southern Africa: Namibia*. Columbia University School of Public and International Affairs. Spring 2017, page 19. <https://www.sipa.columbia.edu/gateway-southern-africa-namibia> (attached in Appendix A).

¹⁶⁰ Melber, Henning. “From Nujoma to Geingob: 25 years of presidential democracy.” www.researchgate.net, December 2015. https://www.researchgate.net/publication/290429183_From_Nujoma_to_Geingob_25_years_of_presidential_democracy.

¹⁶¹ Jenik Radon, “*Walk Tall! A Beautiful Tomorrow for Emerging Nations: an Anthology of Inclusive Principles for National Growth and Prosperity : Equity, Rule of Law and Sustainable Natural Resource Development*.” Papua New Guinea: Paradise Publishing Haus Ltd., 2018.

Appendix A

NAMIBIA – THE SUCCESS STORY FEW HAVE HEARD ABOUT AND A FUTURE GATEWAY TO SOUTHERN AFRICA

Namibia is the African success story that should be making headlines. In 1990 Namibia gained its independence, after having been a German colony, a mandate under the League of Nations and an administrative extension of South Africa. By 2013, in almost record speed, Namibia was already declared an upper middle income nation, notwithstanding that significant income inequity and poverty still existed. Statistics, however, tell only part of the story.

While the world's economies struggled to recover from the aftereffects of the economic meltdown in 2007/08, Namibia nevertheless succeeded in reducing its GINI coefficient, the internationally accepted standard on the measurement of income inequality, by 25 points from 0.597 in 2009/10 to 0.572 in 2015/16. Extreme poverty (based on \$1.90 per day and measured by PPP (purchase power parity) has been reduced from the time of independence in 1990 from more than half the population to 22.6% in 2010. Over the same period, secondary school enrollment increased from 38% to 65% of the school age group. The literacy rate, which measures only bare basic knowledge, increased from 75.8% in 1991, which was for a developing nation already relatively quite high, to 90.8% by 2015. While these figures are impressive and demonstrate that Namibian success is strongly correlated with improved education, Namibia still has significant challenges.

On the Human Development Index of the UN Development Program, Namibia is ranked 12th in Africa, behind Seychelles and Mauritius, which are ranked 1st and 2nd, and also behind its neighbors Botswana and South Africa, which are ranked 6th and 9th respectively. But 12th in Africa still places Namibia only 125th in the world, which can at best be described as a middling rank. So one can ask why Namibia is considered a success story. And the answer is simple. Namibia has since its independence in 1990 made steady, step-by-step, progress, building a solid cultural and political foundation on which to build a prosperous future.

Namibia has taken the words of its founding father Sam Nujoma to heart: “Progress generates demand for more progress, and that is what ultimately drives and accelerates progress.” It is the demands of the Namibian people which generate ever more progress, demand for education and demand for fiscal frugality.

Namibia has until recently avoided the debt death trap of borrowing to pay for expenses. The Government followed a conservative or cautious fiscal policy. Government debt to GDP averaged just 21.59% from 1993 to 2016 when it suddenly ballooned by doubling to 40.70 %, which makes it comparable to similarly emerging nations. Annual economic growth had slowed to below 2% which necessitated taking on debt, but also made the repayment of that debt, particularly as a significant portion is in foreign currency, a challenge, notwithstanding that government expenses have recently been drastically cut by delaying or cancelling high cost infrastructure projects. But while attention on present day-to-day challenges are a necessity, political will requires envisioning a prosperous future.

This author, as an outside observer and friend of Namibia, believes that Namibia can “punch above its weight” and join the ranks of the world’s leading (small) nations, specifically Singapore, an Asian nation which moved from being a British colonial outpost to being a global financial and corporate centre and which now challenges the world with the educational performance of its students, and Estonia, a northern European nation which moved from being locked in the Soviet Union to being the inventor of Skype and which now challenges the world with its e-governance and e-residency programs.

Namibia can realize and ensure its potential by becoming “the” transport hub of Southern Africa, by being a solar energy producer and exporter to its neighbors, by being a tourist destination of choice, and, very importantly, by continuing to be a symbol of media freedom in Africa, as well as the world. On an index of media freedom, Namibia ranks 1st in Africa, and 24th in the world, just two spots behind Canada. Media freedom gives meaning to the words of Sam Nujoma: “The foundation of all good solutions to problems is discussion and debate.” And media is the core of this foundation.

Namibia also has assets that have served Singapore, Estonia and other dynamic small nations well. Namibia has a pivotal geographical location at the tip of Africa. Namibia has focused

on the education of its people as both Singapore and Estonia have. Namibia has made a virtue of stability as both Singapore and Estonia have. But as Singapore and Estonia have demonstrated, success requires more. The foundation of economic progress presupposes that a nation is a beacon to the world that it is open to do business and that it welcomes investors from around the world. Here, unfortunately, Namibia still falls short.

In the World Bank's ease of doing business ranking, Singapore ranks 2nd and Estonia, which, as noted, got a start only in 1991, already ranks 12th. Namibia, which became independent a year before Estonia, ranks 9th in Africa but just 108th in the world, considerably behind the African leader, Mauritius, which is 1st in Africa and 49th in the world, Rwanda, 2nd in Africa and 59th in the world, and Namibia's neighbor, Botswana, 3rd in Africa and 71st in the world. Still Namibia has the potential to surpass its African competitors and rank with the global leaders, Singapore and Estonia. As already noted, Namibia possesses still significant untapped assets: location, sun (solar), and natural resources. But for Namibia to realize its potential, good governance, sound fiscal and monetary policy, and economic planning will be required. President Hage Geingob's Harambee Prosperity Plan will have to be regularly renewed and extended to 2050.

By applying Namibia's assets as the basis of its economic development and by educating all of its people, not just at the secondary school level, but at the tertiary (university) level, and, with all due respect, implementing recommendations from this Columbia Capstone Report, which have extended the Harambee Prosperity Plan and have recommended strengthening and deepening Namibia's rule of law regime with, among other things, the revision or amendment of its investment law. This law needs to stand as a beacon to the world that Namibia is a transparent country and open for investment so that Namibia can attract the significant investment it needs to be a prosperous country for all of its people. Namibia will then live up to the words of its founding father, Sam Nujoma: "The spirit of ubuntu – "I am because you are" and "you are because we are" – needs to pervade our [African] relationships at all levels in our [African] society, that is at company level, Government level, and especially at regional level, so that we [in Africa] can act as a family of nations ... We need to fast-track industrial development by bringing both high-tech and appropriate technology to our shores. We do not

have time to ride the learning curve which others have done before us.”

Openness is the path to success for Namibia as it will permit all to contribute, and creatively contribute, albeit only if economic activity is embedded in an equitable rule of law system. By 2050, the worldwide media will herald the success of Namibian openness by headlining the dynamic small tigers of the world: Estonia and Singapore as well as Namibia.

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Namibia as the Singapore of Southern Africa

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Namibia as the Singapore of Southern Africa- Report by Jenik Radon



Namibia right now is at a crossroads. Its political, social and economic indicators put it solidly in the pack of middle income developing countries.

The government has mapped out a strategy for national development and made small but solid steps toward its implementation since the adoption of Vision 2030 in 2004.

If Namibia sticks with this measured approach to development, its people are likely to see a gradual increase in their quality of life over the next 15 years. However, this plan only scratches the surface of Namibia's true potential.

A more rapid and revolutionary approach to development that emphasises Namibia's capacity to become a world class logistics and transport hub for all of southern Africa, supported by a carefully designed natural resource fund, would allow Namibia to leap frog from its place in the middle of the pack into a new league among the most dynamic and prosperous economies of Africa and the world.

When I first visited Singapore in 1971, mosquito-laden swamps had not yet been drained in sections of the city and its socio-economic indicators were similar to those of Namibia now. Less than 45 years later, Singapore has become one of the world's most advanced economies with a highly educated population, one of the world's leading universities and impeccable infrastructure, serving as a logistics and transport hub for all of Southeast Asia. This transition happened so swiftly and directly because prime minister Lee

Kuan Yew recognised the true potential of Singapore's prime location in Southeast Asia. He laid out a clear vision for Singapore's future as a regional hub, giving the population something to work toward collectively.

Vision 2030 already lays a foundation for Namibia's transformation into a regional hub. However, the image of Namibia as a centre for the region needs to be communicated more effectively and frequently to the population. Emphasis should be put on Namibia's unique potential. Upgrading the deep water port of Walvis Bay would cut out hundreds of miles that people and shipments need to travel to reach strategic locations in southern Africa. With upgrades to the rail system and port infrastructure, Walvis Bay can become a port for minerals from Angola, Zambia, Zimbabwe and Botswana. This vision of Namibia at the centre of the region needs to not only inform all policy planning, but also to be constantly communicated to domestic and international audiences until it becomes a reality.

Namibia is blessed with natural resources. However, as we know, natural resources can become a curse if economies rely too heavily on them at the expense of dynamism in other sectors. Natural resources need to become the motor for development in the logistics and transport sectors. For natural resources to become the motor for Namibia's development as a world class regional hub, Namibia needs a smartly crafted natural resource fund that manages and reinvests the profits from natural resources. With a profitable natural resource fund, much like that of Norway, Namibia can both save money for future generations and invest now in health, education and infrastructure development that will facilitate its transformation into a logistics and transport hub.

Namibian officials are not only well educated and internationally minded, but they have adopted norms of business and professional etiquette that many in developing countries ignore. When I send an email to a Namibian official, I invariably get a timely, coherent response. Moreover, with English as the official language and a large segment of the population fluent in German, the language of EU's economic and commercial centre, Namibia can readily conduct business globally. These linguistic proficiencies and engrained norms of professionalism will help Namibia become a world class regional hub.

However, there is still more to do on this front. The influx of insurance companies, financial institutions and major international companies invariably involved in the logistics and transport industries will open up unprecedented employment opportunities in Namibia. But the population needs to be in a position to take advantage of these opportunities. Like the Asian Tigers of South Korea and Singapore, the Namibian government must make the further improvement of human capital through health and education a high-level priority.

Another factor that facilitated Singapore's dramatic economic success was its anti-corruption reform. Currently, Transparency International ranks Singapore as the 7th least corrupt country in the world. Namibia by comparison is ranked 55th. In order to transform the economy effectively and swiftly, the Namibian government needs to set the goal of being in the top 10 of the world's least corrupt countries.

By cracking down on corruption at all levels in the government and society, particularly in the natural resource sector, Namibia will gain the resources and reputation to position itself domestically and internationally as a world class regional hub.

Change never happens overnight, but with clarity of vision and commitment to its implementation, Namibia is poised to become one of the most dynamic economies in Africa and the world. The only question is, will it decide to take this leap?

Source: www.namibian.com

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