Natural Resource Governance Institute

2017 Resource Governance Index

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Foreword

Effective governance of the oil, gas and mining sectors is a persistent challenge, especially for low- and middle-income countries. But as the Resource Governance Index reveals, it is not an insurmountable one. In the index we see many examples of developing countries defying expectations and stereotypes—sometimes in one policy area, sometimes in many—making progress toward a more judicious use of their natural resources for national development. Unfortunately, this is not true for all countries, some having experienced in recent years worrisome setbacks in the proper use of their natural resources.

Poor management and corruption can take root anywhere, in countries rich or poor. These scourges cannot be eliminated everywhere, all of the time. But citizens, journalists, legislators, politicians, companies, investors and academics can work to mitigate them, and expose them early on—and that is where the data carefully compiled here by the Natural Resource Governance Institute become so valuable.

The staff of our institute have worked hard to provide evidence and documentation to assist in the critical struggle for better natural resource governance. Hopefully the insightful data provided by the index will contribute to the work of those committed to economic prosperity and social justice in resource-producing countries.

Ernesto Zedillo Ponce de León

Professor in the Field of International Economics and Politics, Yale University

Former President of Mexico

Chair, Board of Directors
Natural Resource Governance Institute

Introduction

The extraction of oil, gas and minerals is one of the most politically, socially and economically complex undertakings in development. It is a business that connects the world and sates much of our hunger for energy and raw materials. It produces inputs to almost every physical product manufactured. It has contributed to one of the most fundamental challenges in human history—climate change. It has produced trillions of dollars in revenues.

These vast sums of money contrast cruelly with the poverty of many countries where resources are found—1.8 billion people live in poverty in the scores of countries assessed in this index.[1] The empirical evidence is clear: changing this dire situation requires improving governance—the institutions, rules and practices that determine how company executives and government officials make decisions and engage and affect citizens, communities and the environments they inhabit.

To improve governance, one has to diagnose in detail what works and what does not, and that requires measurement. The Resource Governance Index assesses the quality of natural resource governance in 81 countries that together produce, among other commodities, 82 percent of the world's oil, 78 percent of its gas and 72 percent of all copper.[2] The index has as its intellectual foundation the Natural Resource Charter; both are the product of the expertise of NRGI staff and a network of external scholars and practitioners.

The index is the sum total of 89 country-level assessments (in eight countries we assess both oil and gas and mining sectors), formulated using a framework of 149 critical questions answered by 150 researchers, drawing upon almost 10,000 supporting documents. Researchers' careful assessments of extractive sector factors are combined with pre-existing data, from other sources, on countries' broader enabling environments. The findings presented in this report reflect highlights from a much larger set of data and country profiles available online at www.resourcegovernanceindex.org.

So what does the index tell us? The data show that despite substantial efforts from governments, advocates and the international community, in most countries governing resources remains a major challenge. Every country could improve in at least one important area of governance, and most countries have significant room for progress in multiple areas.

At the same time, reformers have achieved a great deal. The index shows that many countries—even some in very challenging situations—have taken concrete steps in the form of rules and procedures. Those promoting change need not look far to find inspiration on how to better govern—there are countries pursuing innovative approaches and progressing in every region. The evidence shows that more progress is taking place in the adoption of rules than in their actual practice; often those who seek improved governance should in many places focus on implementing existing legal frameworks. We also learn that better resource governance emerges in countries where civic space is safeguarded and corruption risks are mitigated.

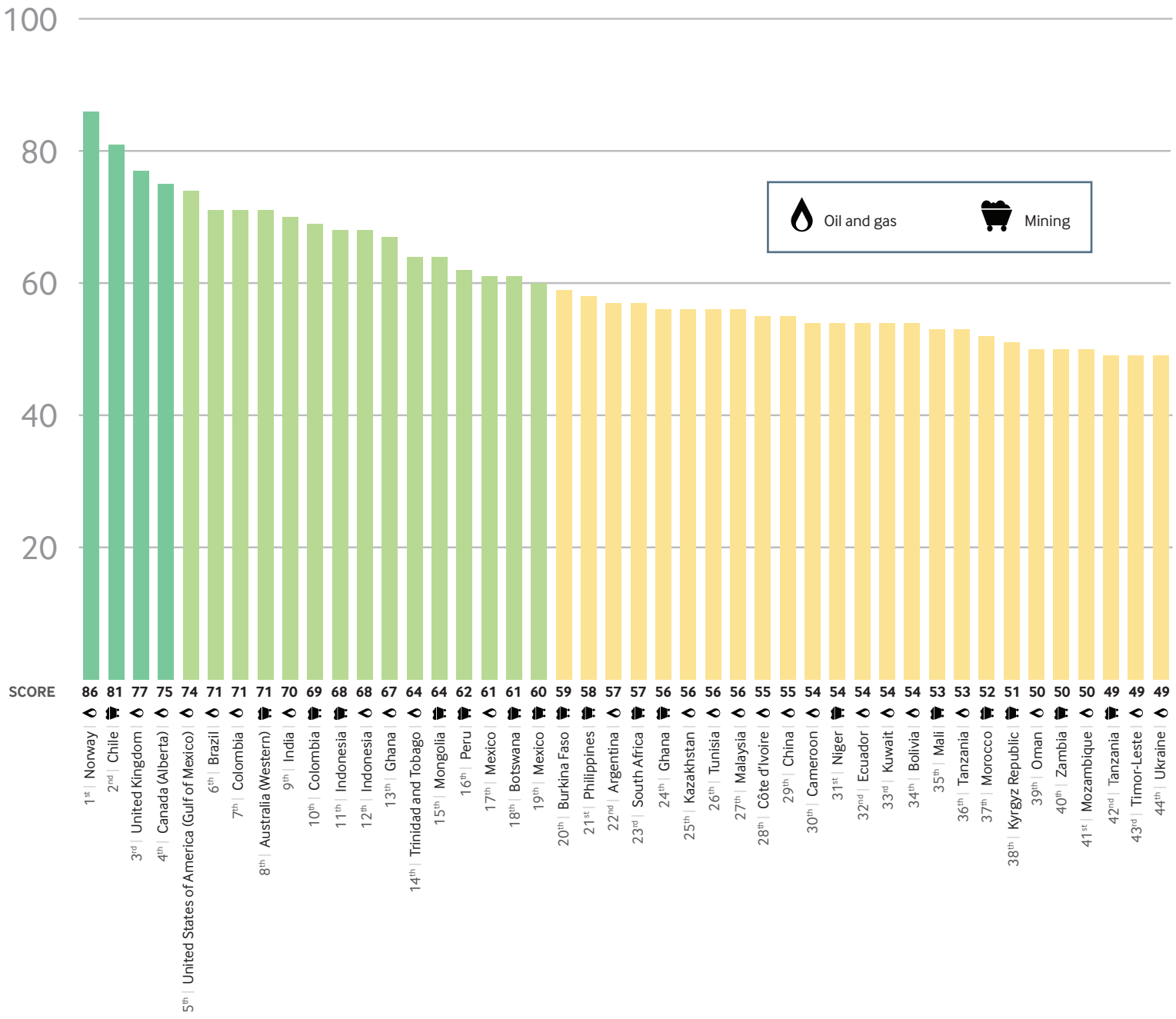
Considering the imperative of inclusive growth in resource-rich countries, improvements at the international level are also called for—including by members of the G7, multinational companies and international financial institutions. Work remains for producing countries that seek further economic transformation and diversification, better protection of the environment and assurance that citizens benefit from extraction.

The main priorities and preferred pathways to action will vary across countries and actors, which means that informed and inclusive public debate is essential. These dialogues must incorporate political, economic, social and environmental considerations. We trust that the evidence in this index will inform such debates and the resulting decisions.

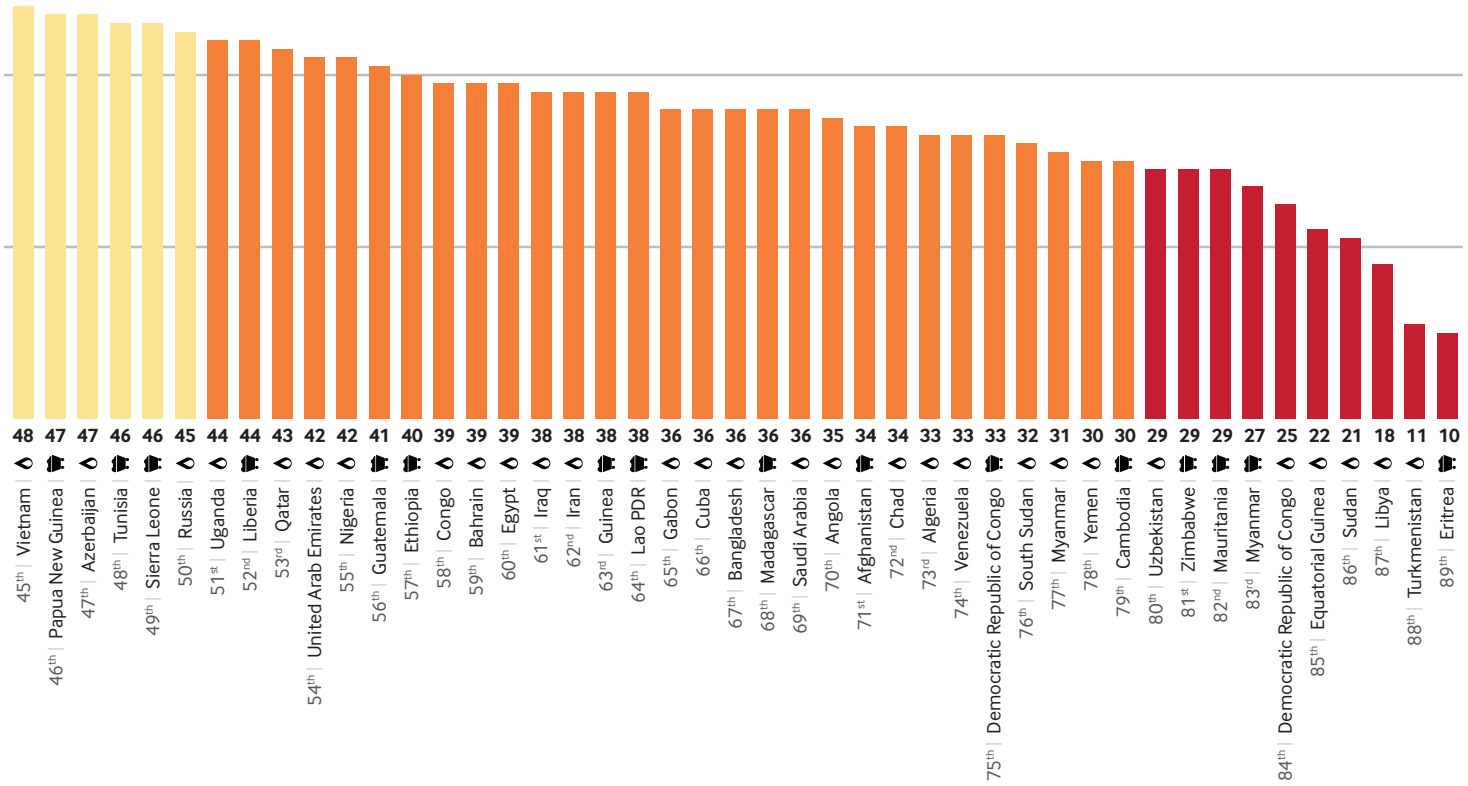
Daniel Kaufmann

President and CEO
Natural Resource Governance Institute

Resource Governance Index country scores and rankings



Good	≥ 75	A country has established laws and practices that are likely to result in extractive resource wealth benefiting citizens, although there may be some costs to society.
Satisfactory	60-74	A country has some strong governance procedures and practices, but some areas need improvement. It is reasonably likely that extractive resource wealth benefits citizens, but there may be costs to society.
Weak	45-59	A country has a mix of strong and problematic areas of governance. Results indicate that resource extraction can help society, but it is likely that the eventual benefits are weak.
Poor	30-44	A country has established some minimal procedures and practices to govern resources, but most elements necessary to ensure society benefits are missing.
Failing	< 30	A country has almost no governance framework to ensure resource extraction benefits society. It is highly likely that benefits flow only to some companies and elites.



Creating the 2017 Resource Governance Index

1. NRGI creates a questionnaire consisting of 149 questions.

2. One hundred and fifty experts, in 81 countries, research the issues, compile documentation and complete the questionnaire.

3. NRGI collates and assesses the quality of all collected data.

4. NRGI translates raw data into scores for the two bespoke components of the Resource Governance Index—value realization and revenue management.

5. NRGI collects additional data to capture countries' "enabling environments"—the broader institutional governance and transparency context.

6. NRGI calculates the index using the primary and secondary data.

7. NRGI analyzes results and generates key findings.

8. NRGI publicizes and disseminates the index and provides recommendations to key stakeholders.

9. Governments, journalists, civil society actors and companies use the findings from the index to improve resource governance for the benefit of citizens and investors.

WHAT THE INDEX MEASURES

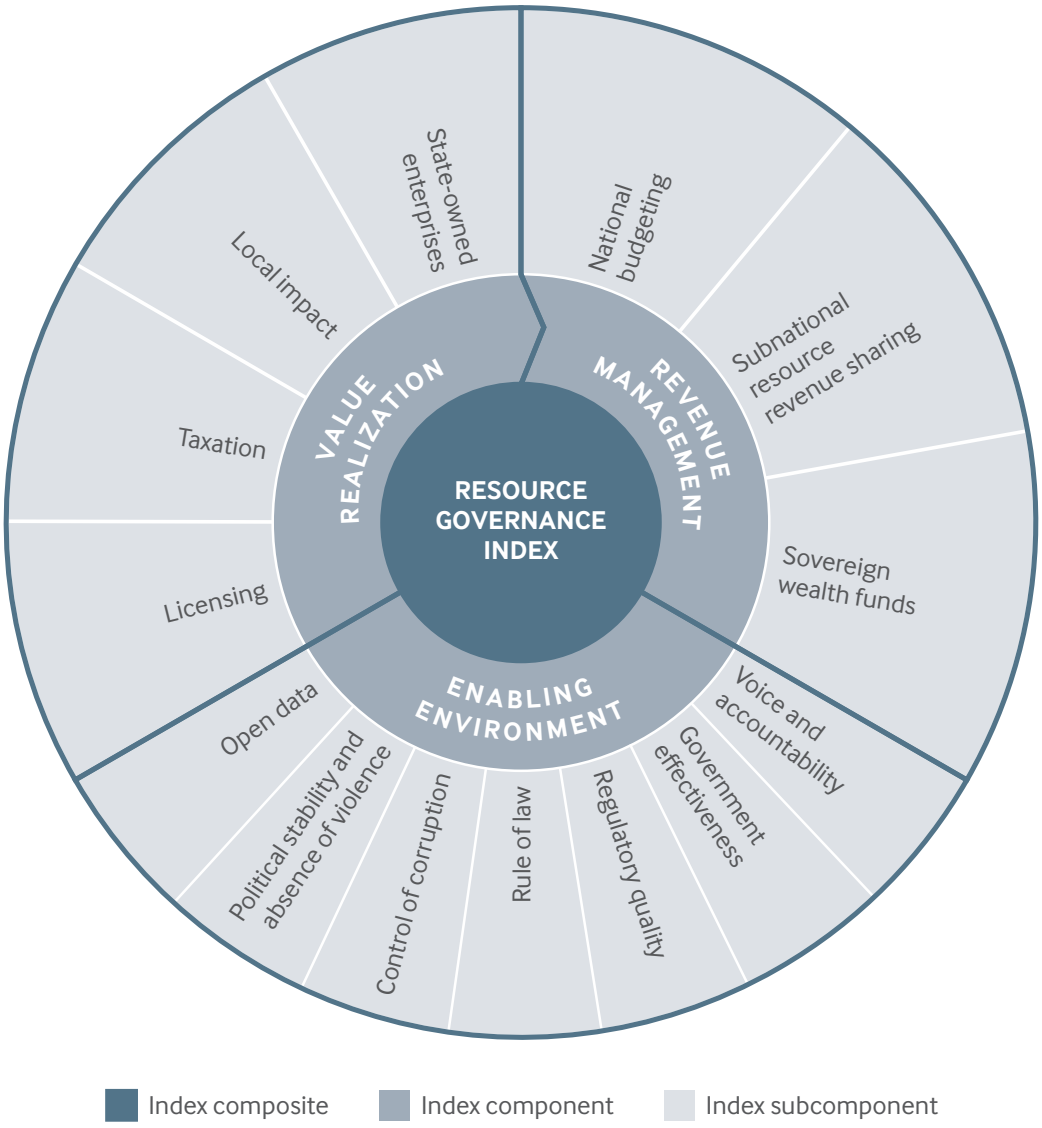
The Resource Governance Index assesses policies and practices that authorities employ to govern their countries' oil, gas and mining industries. The index provides a composite score for each assessment. For most countries, the index assesses either the oil and gas sector, or the mining sector. For eight countries, the index assesses both.

For each assessment, NRGI has calculated the composite score using the scores of three index components. Two of the components comprise new research based on expert answers to a detailed questionnaire, and directly measure governance of countries' extractive resources. The first component—value realization—covers the governance of allocating extraction rights, exploration, production, environmental protection, revenue collection and state-owned enterprises. The second—revenue management—covers national budgeting, subnational resource revenue sharing and sovereign wealth funds. The index's third component assesses a country's enabling environment. This component draws on pre-existing research to measure the broader governance context.[3]

The score for each of these three components is based on the scores given to its subcomponent policy areas. Each of the subcomponents within value realization and revenue management focuses on distinct areas of governance and relates to a precept in NRGI's Natural Resource Charter and its benchmarking framework—analytical and diagnostic tools that represent the chain of decisions that governments and societies must make to benefit from their resources.

Scores are on a scale of zero to 100 at each level of the index, allowing users to benchmark the quality of resource governance across the composite, components and subcomponents—both within and between countries.

As with any exercise of this type, there is some inherent uncertainty around the index scores. In practical terms this means it may not be sensible to make conclusions based on small differences in scores. For this reason, results are grouped into performance bands: good, satisfactory, weak, poor and failing.



Resource Governance Index composite and component scores

Index rank	Country	Assessed sector	Index score	Value realization score	Revenue management score	Enabling environment score
1	Norway	Oil and gas	86	77	84	97
2	Chile	Mining	81	74	81	90
3	United Kingdom	Oil and gas	77	70	68	95
4	Canada (Alberta)	Oil and gas	75	69	59	97
5	United States of America (Gulf of Mexico)	Oil and gas	74	66	63	93
6	Brazil	Oil and gas	71	62	78	72
7	Colombia (oil and gas)	Oil and gas	71	59	85	67
8	Australia (Western)	Mining	71	65	51	96
9	India	Oil and gas	70	75	66	69
10	Colombia (mining)	Mining	69	59	82	67
11	Indonesia (mining)	Mining	68	64	76	65
12	Indonesia (oil and gas)	Oil and gas	68	64	76	65
13	Ghana (oil and gas)	Oil and gas	67	65	65	70
14	Trinidad and Tobago	Oil and gas	64	64	57	71
15	Mongolia	Mining	64	63	54	73
16	Peru	Mining	62	68	57	62
17	Mexico (oil and gas)	Oil and gas	61	64	54	65
18	Botswana	Mining	61	40	62	81
19	Mexico (mining)	Mining	60	62	53	65
20	Burkina Faso	Mining	59	66	54	57
21	Philippines	Mining	58	55	52	67
22	Argentina	Oil and gas	57	58	54	58
23	South Africa	Mining	57	50	40	80
24	Ghana (mining)	Mining	56	61	37	70
25	Kazakhstan	Oil and gas	56	53	54	61
26	Tunisia (oil and gas)	Oil and gas	56	60	40	67
27	Malaysia	Oil and gas	56	49	41	77
28	Côte d'Ivoire	Oil and gas	55	60	60	46
29	China	Oil and gas	55	52	54	59
30	Cameroon	Oil and gas	54	59	70	33
31	Niger	Mining	54	55	60	47
32	Ecuador	Oil and gas	54	51	58	52
33	Kuwait	Oil and gas	54	44	51	67
34	Bolivia	Oil and gas	54	61	51	49
35	Mali	Mining	53	48	70	42
36	Tanzania (oil and gas)	Oil and gas	53	65	40	53
37	Morocco	Mining	52	56	35	64
38	Kyrgyz Republic	Mining	51	57	51	44
39	Oman	Oil and gas	50	32	43	76
40	Zambia	Mining	50	58	35	58
41	Mozambique	Oil and gas	50	66	42	43
42	Tanzania (mining)	Mining	49	54	40	53
43	Timor-Leste	Oil and gas	49	49	57	42
44	Ukraine	Oil and gas	49	61	40	45
45	Vietnam	Oil and gas	48	57	30	59

Index rank	Country	Assessed sector	Index score	Value realization score	Revenue management score	Enabling environment score
46	Papua New Guinea		47	50	50	40
47	Azerbaijan		47	49	43	49
48	Tunisia (mining)		46	40	30	67
49	Sierra Leone		46	62	35	40
50	Russia		45	47	40	47
51	Uganda		44	42	42	47
52	Liberia		44	59	30	41
53	Qatar		43	33	19	77
54	United Arab Emirates		42	32	16	78
55	Nigeria		42	50	44	31
56	Guatemala		41	42	35	46
57	Ethiopia		40	46	38	37
58	Congo		39	45	44	29
59	Bahrain		39	27	26	63
60	Egypt		39	45	30	41
61	Iraq		38	52	47	16
62	Iran		38	36	45	34
63	Guinea		38	53	24	37
64	Lao PDR		38	42	30	41
65	Gabon		36	18	47	44
66	Cuba		36	29	23	57
67	Bangladesh		36	39	35	34
68	Madagascar		36	36	34	38
69	Saudi Arabia		36	23	24	60
70	Angola		35	50	31	25
71	Afghanistan		34	58	31	14
72	Chad		34	39	43	19
73	Algeria		33	40	25	35
74	Venezuela		33	48	34	17
75	Democratic Republic of Congo (mining)		33	52	35	12
76	South Sudan		32	42	47	5
77	Myanmar (oil and gas)		31	44	30	19
78	Yemen		30	50	28	11
79	Cambodia		30	31	18	40
80	Uzbekistan		29	40	25	22
81	Zimbabwe		29	37	30	20
82	Mauritania		29	41	10	36
83	Myanmar (mining)		27	33	30	19
84	Democratic Republic of Congo (oil and gas)		25	44	20	12
85	Equatorial Guinea		22	29	18	17
86	Sudan		21	26	26	11
87	Libya		18	27	20	6
88	Turkmenistan		11	11	0	21
89	Eritrea		10	15	5	10

Findings

Most countries still face daunting governance challenges

Having billions of dollars' worth of oil, gas or minerals below ground would suggest that citizens in a country should be well off, but the economies of countries rich in resources have grown more slowly than the economies of countries that are resource-poor.[4] One reason for this disparity is the quality of governance.[5] Of the 81 countries included in the Resource Governance Index, 47 are classified by the International Monetary Fund as resource-rich, with oil, gas or minerals dominating the economy.[6] The majority of these countries exhibit weak, poor or failing resource governance in index assessments. But this is not a universal paradox. Countries like Botswana, Indonesia, Mongolia and Norway are all resource-rich, but sit in the good or satisfactory performance bands.

Wealth is not a precondition for good governance

The index shows that rich countries are not immune to resource governance problems. Western Australia scores low in governance of licensing and taxation. The U.S. scores only 50 of 100 points for its policies and practices in protecting the local environment in the Gulf of Mexico. Of the 13 high-income countries in the index, 6—all in the Middle East—fail to achieve either good or satisfactory composite scores. The worst-performing in this group is Saudi Arabia, which scores only 36 points.

Conversely, several middle- and low-income economies do comparatively well: Brazil, India and Colombia are in the top ten. Even many of the poorest countries in the index—while failing to achieve good or satisfactory composite scores—do perform well in specific subcomponents.

Resource governance differs significantly within regions

The index shows that countries with similar historical and geographical characteristics govern their extractive resources differently. There is a large variance in governance performance for example in Eurasia; Mongolia achieves a score of 64 of 100 points but Turkmenistan scores only 11. In Latin America, Chile scores 81 points, and Colombia's oil and gas sector 71, in contrast to its neighbor Venezuela, which scores only 33. Generalizations about the performance of a whole region can be misleading since there is significant variation across countries—but the better performers show others in the vicinity that good governance in extractives is possible.

Resource governance varies significantly within countries

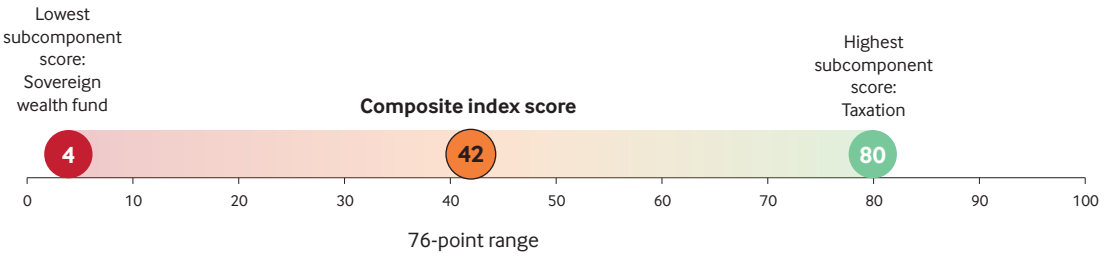
Looking past a country's composite score to the components and subcomponents of the assessment reveals a great deal of variation. In over half of the assessments there is a difference of more than 20 points between the strongest and weakest components: Sierra Leone's satisfactory value realization score of 62 is vastly superior to its revenue management score of 35, for example. But this pattern can also be seen in rich countries such as the U.S. and Canada (with weaker scores in their revenue management components), and in oil-rich countries in the Persian Gulf.

Furthermore, very few countries achieve a good or satisfactory score across all subcomponents evaluated in the index. These differences matter because effective resource governance (and consequent benefits from extraction) requires a broad-based foundation of strong policies and procedures.[7] For instance, in its oil and gas sector Colombia scores 100 points for governance of its sovereign wealth fund, but only 36 for protecting local communities and the environment. The country may have instituted

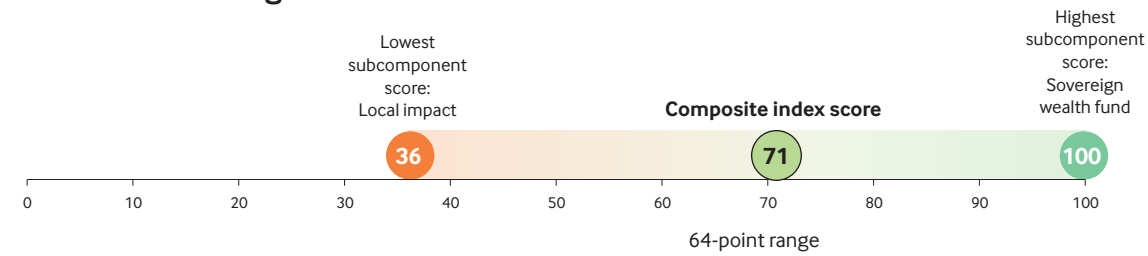
robust measures to manage its Savings and Stabilization Fund, but without better regulation and protection, communities living near oil extraction sites may be exposed to intolerable risks, significantly weakening the case that oil extraction has benefited Colombians overall.

Composite scores mask varying performance at the subcomponent level

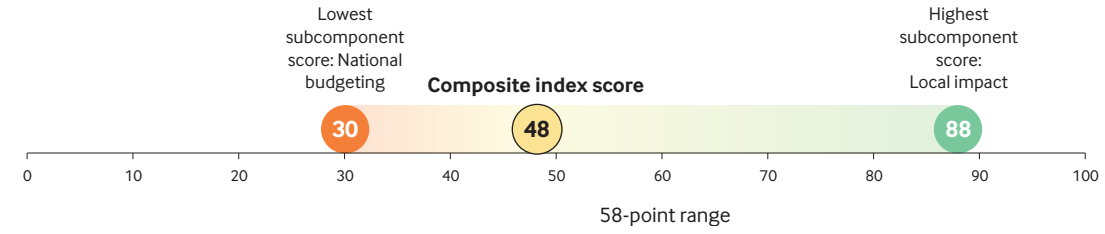
Nigeria



Colombia (oil and gas)

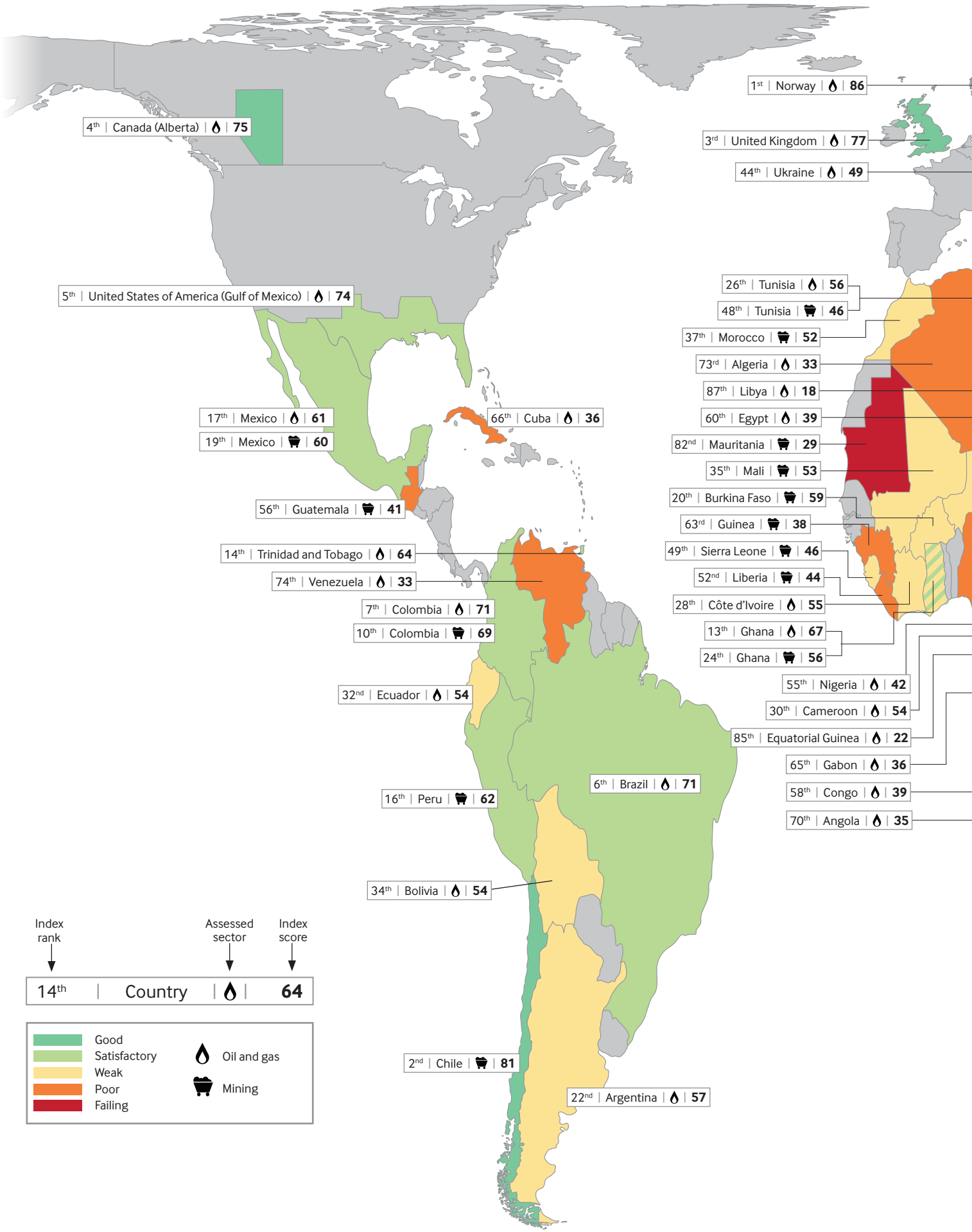


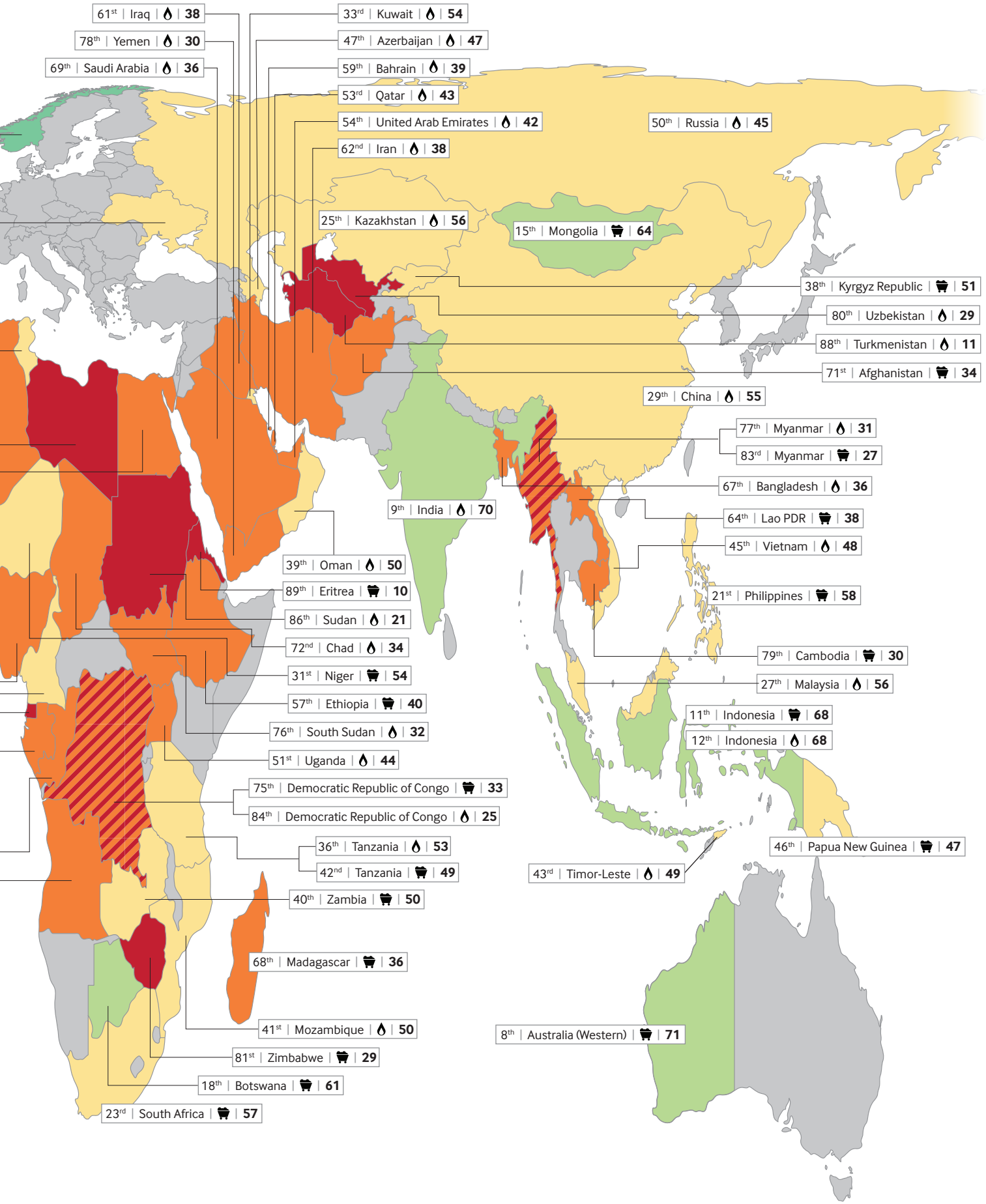
Vietnam



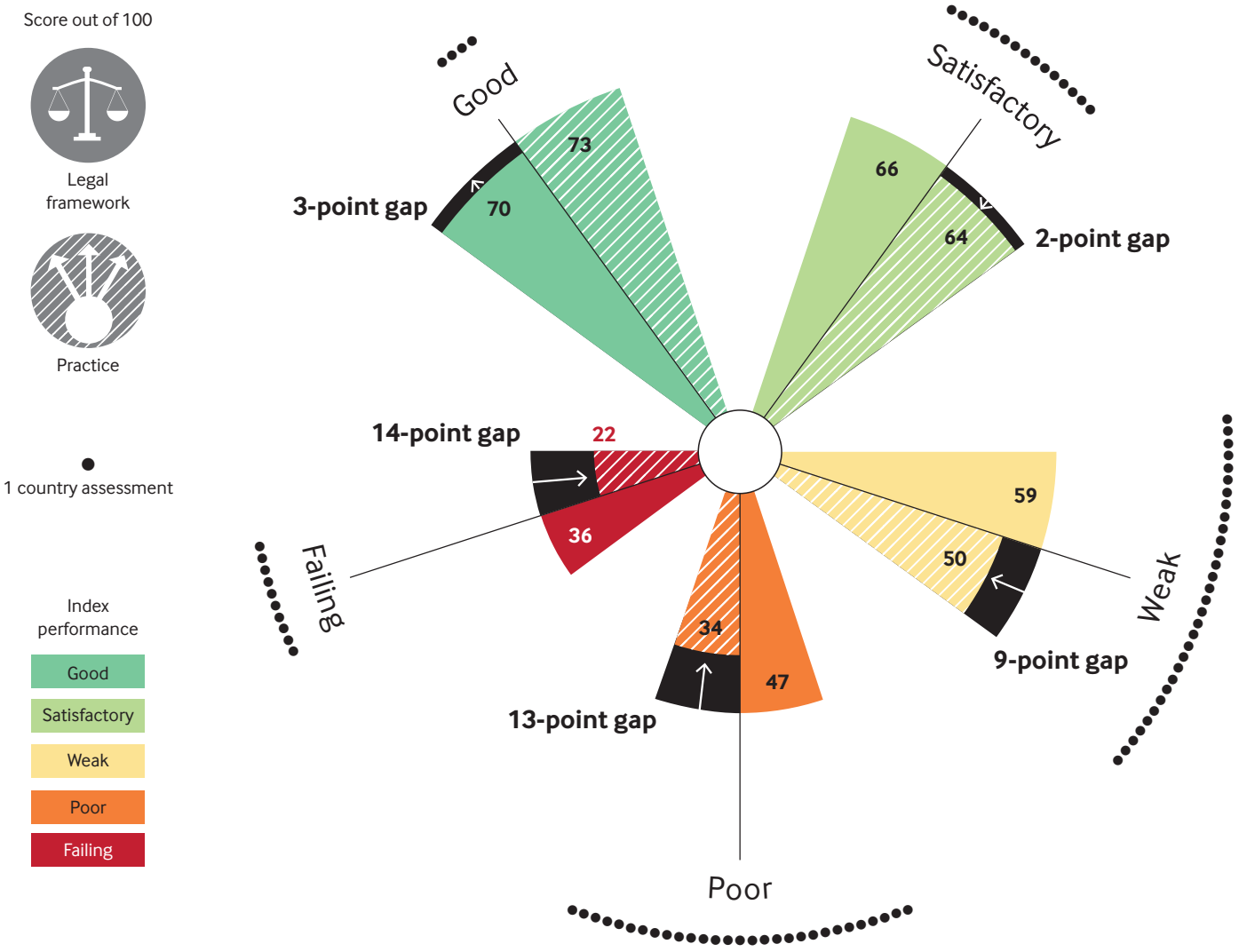
Resource governance around the world

Resource Governance Index country scores and rankings




61st | Iraq | 38
78th | Yemen | 30
69th | Saudi Arabia | 36
33rd | Kuwait | 54
47th | Azerbaijan | 47
59th | Bahrain | 39
53rd | Qatar | 43
54th | United Arab Emirates | 42
62nd | Iran | 38
50th | Russia | 45
25th | Kazakhstan | 56
15th | Mongolia | 64
38th | Kyrgyz Republic | 51
80th | Uzbekistan | 29
88th | Turkmenistan | 11
71st | Afghanistan | 34
29th | China | 55
77th | Myanmar | 31
83rd | Myanmar | 27
67th | Bangladesh | 36
9th | India | 70
64th | Lao PDR | 38
45th | Vietnam | 48
39th | Oman | 50
89th | Eritrea | 10
86th | Sudan | 21
72nd | Chad | 34
21st | Philippines | 58
79th | Cambodia | 30
31st | Niger | 54
27th | Malaysia | 56
57th | Ethiopia | 40
11th | Indonesia | 68
12th | Indonesia | 68
76th | South Sudan | 32
51st | Uganda | 44
75th | Democratic Republic of Congo | 33
84th | Democratic Republic of Congo | 25
46th | Papua New Guinea | 47
36th | Tanzania | 53
43rd | Timor-Leste | 49
42nd | Tanzania | 49
40th | Zambia | 50
68th | Madagascar | 36
41st | Mozambique | 50
8th | Australia (Western) | 71
81st | Zimbabwe | 29
18th | Botswana | 61
23rd | South Africa | 57

Countries with the weakest resource governance are least likely to implement the rules they set



Countries fail to follow their own rules

The data in the index also inform the computation of a country's scores for legal framework and implementation. The legal framework score includes all indicators relating to the coverage and quality of the laws and regulations that shape resource governance (e.g., whether a country has a rule requiring the disclosure of contracts). The practice score covers indicators regarding actions taken by the government (e.g., whether officials have actually disclosed contracts). This practice measure shows how well a government implements the policies and laws it has established.

Good governance means having good rules, strong oversight to enforce the rules, and the competence and willingness to follow them. The index data show the extent to which countries do this. Combining the legal framework questions in the index questionnaire as one value and the implementation questions as another reveals two general conclusions. One is that countries must improve the quality of their laws. The other is that countries often fail to follow rules that do exist. On average, countries' legal frameworks score 54 of 100 points. For practice, countries score 45—an average difference of nine points. And this gap is even wider for countries exhibiting the worst overall governance: in countries with failing governance, the gap between the quality of legal framework and practice is on average 14 points.

A few countries follow good practices without corresponding legal requirements. This is the case in Malaysia, which—more so than any other country—performs better in practice than it does in its legal framework. State oil company Petronas' financial reporting and contracting practices are good, but no rules require the company to report in this manner. Yet more generally, good practices in the absence of legal requirements could be more easily subject to reversal.

The widest gap between law and practice is seen in two particular subcomponents of the index: local impacts and subnational resource revenue sharing. The average score for laws governing the local impacts of extraction is 64 points—but countries score only 23 points for the application of these laws. This usually results from countries' failure to implement environmental regulations. Similarly, on average the countries assessed receive 76 points for subnational resource revenue sharing laws, but only 45 points for related practices. Twenty-three of the 33 national governments that transfer natural resource revenues to subnational authorities are required to commission audits of these transfers. But audits actually only took place in 12 of the assessed contexts.

Analysis of the index data also shows that countries are more likely to follow the rules they set for themselves if they also control corruption well. This suggests that a divergence between laws and practice is not merely a matter of poor technical implementation capacity.

Performance in control of corruption	Gap between legal framework and practice scores
Good/satisfactory	3
Weak	12
Poor/failing	13

Why resource governance matters

Why do the index results matter? Are there dire consequences if countries mismanage resources? Here are three reasons why resource governance is important.

Mismanaging resources promotes poverty

Resource wealth and how it is managed could make a crucial difference in the lives of the 1.8 billion poor who live in countries assessed by the index.[8] Almost half of these people live in countries with weak, poor or failing resource governance. For many of these countries, the dividends of well-governed resource extraction offer a path from poverty. But without stronger institutions and policies, as well as a reduction in corruption, countries are more likely to fall victim to the "resource curse"—under which the poor stay poor and elites accumulate further wealth. The results of weak institutions and policies and high corruption have become apparent in recent times. During the last commodity boom, from 2004 to 2014, despite the extraction of trillions of dollars' worth of oil, gas and minerals, the non-extractive sectors of resource-rich economies grew no faster than before the boom.[9] This matters because in most countries the non-extractive sectors are typically the source of job creation—usually a primary means to reduce poverty.[10]

Strong governance helps mitigate environmental harms

Resource governance matters for the environment and for the people who live close to extraction sites. Competent oil and mining companies in countries with strong resource governance may operate with relatively less local environmental impact (even if the global impact from carbon emissions through the production chain is still immense). In countries with poor resource governance, companies are often lax in their efforts to protect local environments and local communities. From the pollution in Zambia's Kafue River to the deforestation of the Amazon, many environmental harms are at least partly caused by poorly regulated companies extracting resources.

Resource governance will matter even more in the future

Over the past three decades the world's extractive wealth has been shifting from the global North to the global South—proven reserves have risen more quickly in non-OECD countries than OECD countries.[11] The proportion of resource production carried out under poor, weak or failing governance is likely to grow in the future. At the same time, fossil fuel producers in particular face growing uncertainty. To combat climate change, humankind must transition away from fossil fuels. Indeed, if the world does not make this transition quickly enough, many of the world's poor countries face the worst effects of climate change itself. The transition will test governance in countries that produce these fuels.[12]

Resource governance institutions

Improving governance means improving institutions. The index data allow close examination of the institutions commonly found in countries extracting oil, gas and minerals. State-owned enterprises and sovereign wealth funds are two such key institutions.

State-owned enterprises

State-owned enterprises (SOEs) play a pivotal role in many countries' extractive industries. Some harness oil and minerals for national development. Others squander nations' resources through inefficiency and corruption. The index covers both types, assessing the governance of 74 SOEs. Chile's Codelco is the best-governed SOE in the index. The Eritrean National Mining Corporation is the worst, 1 of 14 that are classified as failing. This group includes Saudi Aramco, the largest energy company in the world, which scores only 27 of 100 points. One weakness is its opacity—if authorities in Saudi Arabia wish to sell shares of the company in equity markets, greater transparency may be necessary. Investors, like citizens, need more information.

The granular index data on SOEs show several problem areas. While SOEs on average score 56 points for disclosures and rules related to other aspects of SOE governance, they score only 22 for their conduct in selling oil, gas and minerals. For instance, state operators in Ecuador, Kuwait, Mexico, Saudi Arabia, Sudan, United Arab Emirates and Venezuela provide minimal information on how they sell their countries' oil. This is concerning because in many oil-producing countries such sales produce the majority of public resource revenues; without strong governance, these sales are susceptible to corruption.[13]

Sovereign wealth funds

The index assesses 33 sovereign wealth funds (SWFs) that collectively manage at least USD 3.3 trillion dollars in assets. These funds exhibit a broad range of governance quality. Colombia's Savings and Stabilization Fund is the best-governed fund in the index. The top six performing funds are operated by a diverse group of countries, including Ghana and Timor-Leste. By the index's metrics, the sovereign wealth funds of Chile, Colombia and Ghana perform better than those of Canada and Norway.

Of particular concern are the 11 funds that are classified as failing. This includes the United Arab Emirates' Abu Dhabi Investment Authority, the second-largest fund assessed in the index; it manages USD 590 billion. The funds with the weakest scores have suffered the most from excessive risk-taking, high management fees and politically motivated investments.[14] But there may be many more cases of mismanagement that are simply not apparent. Funds in Algeria, Angola, Chad, Equatorial Guinea, Gabon, Nigeria, Qatar, Saudi Arabia, Sudan and Venezuela are so opaque that there is no way to know how much may be lost to mismanagement—or who benefits from these funds' investments.

State-owned enterprises

Country	State-owned enterprise	Gross sales (USD millions, selected years)	Score [/100]
Chile	Codelco	11,693	90
India	Oil and Natural Gas Corporation of India	23,374	87
Argentina	Yacimientos Petrolíferos Fiscales	14,236	83
Norway	Statoil	45,873	80
Morocco	Office Chérifien des Phosphates	4,890	79
Indonesia (mining)	Antam	680	78
Ukraine	Naftogaz	6,596	76
Ghana (oil and gas)	Ghana National Petroleum Corporation	180	75
Trinidad and Tobago	Petroleum Company of Trinidad and Tobago Limited	3,047	75
Mexico (oil and gas)	Petróleos Mexicanos	52,241	74
Colombia (oil and gas)	Ecopetrol	18,998	73
Bolivia	Yacimientos Petrolíferos Fiscales Bolivianos	6,812	70
Azerbaijan	State Oil Company of the Azerbaijan Republic	32,309	70
Philippines	Philippine Mining Development Corporation	2	70
Zambia	Zambia Consolidated Copper Mines Investment Holdings	163	69
Indonesia (oil and gas)	Pertamina	41,763	66
Tunisia (oil and gas)	Entreprise Tunisienne des Activités Pétrolière	621	66
Iraq	South Oil Company	Not available	66
Kuwait	Kuwait Petroleum Company	106,002	65
Malaysia	Petronas	63,412	65
Brazil	Petrobras	97,314	65
South Africa	African Exploration Mining and Finance Corporation	18	65
Tanzania (oil and gas)	Tanzania Petroleum Development Corporation	35	64
Vietnam	PetroVietnam	7,232	64
Kazakhstan	Kazmunaigaz	492	63
Côte d'Ivoire	Société Nationale d'Opérations Petrolière de Cote d'Ivoire	539	61
Venezuela	Petróleos de Venezuela	55,339	58
China	China National Petroleum Company	68,419	58
Angola	Sonangol	19,135	56
Russia	Gazprom	90,571	56
Ecuador	Petroecuador	8,174	56
Qatar	Qatar Petroleum	463,355	55
Bangladesh	Petrobangla	1,039	54
Mozambique	Empresa Nacional de Hidrocarbonetos	115	53
Cameroon	National Hydrocarbons Corporation	1,096	52
Timor-Leste	Timor Gás & Petróleo, Empresa Pública	10	50
Kyrgyz Republic	Kyrgyzaltyn	485	50
Papua New Guinea	Petromin	76	49

Country	State-owned enterprise	Gross sales (USD millions, selected years)	Score [/100]
Algeria	Sonatrach	70,366	47
Chad	Société des Hydrocarbures du Tchad	Not available	46
Zimbabwe	Zimbabwe Mining Development Corporation	307	45
Nigeria	Nigeria National Petroleum Corporation	6,992	44
Uzbekistan	Uzbekneftegaz National Holding Company	Not available	41
Ghana (mining)	Sankofa Prestea Limited	19	41
Congo	Société Nationale des Pétroles du Congo	Not available	40
Mongolia	Erdenes Mongol	1,246	40
Yemen	Yemen Oil and Gas Corporation	Not available	40
Cuba	Unión Cuba-Petroleo	Not available	39
Mauritania	Société Nationale Industrielle et Minière	1,117	38
Guinea	Société Guinéenne du Patrimoine Minier	1	38
Madagascar	Kraomita Malagasy	Not available	36
Egypt	Egyptian General Petroleum Corporation	Not available	36
Democratic Republic of Congo (mining)	Gécamines	Not available	35
Niger	Société de Patrimoine des Mines du Niger	127	35
Tunisia (mining)	Compagnie de Phosphate de Gafsa	260	35
Myanmar (oil and gas)	Myanmar Oil and Gas Enterprise	Not available	35
Tanzania (mining)	State Mining Corporation	Not available	33
Libya	National Oil Corporation	Not available	32
Oman	Oman Oil Company	724	32
Bahrain	Bahrain Petroleum Company	5,310	32
Botswana	Debswana	3,922	29
South Sudan	Nile Petroleum Corporation	Not available	28
Saudi Arabia	Saudi Aramco	Not available	27
United Arab Emirates	Abu Dhabi National Oil Company	Not available	27
Democratic Republic of Congo (oil and gas)	Société Nationale des Hydrocarbures (previously Cohydro)	Not available	25
Ethiopia	Adola Gold Mine	Not available	24
Iran	National Iranian Oil Company	Not available	22
Myanmar (mining)	Myanmar Gems Enterprise	Not available	16
Sudan	Sudanese Petroleum Corporation	Not available	13
Uganda*	Uganda National Oil Company	0	13
Gabon	Gabon Oil Company	Not available	11
Turkmenistan	Turkmengas State Concern	Not available	10
Equatorial Guinea	GEPetrol	Not available	7
Eritrea	Eritrean National Mining Corporation	Not available	4

**The Uganda National Oil Company came into being in mid-2016. It has not commenced activities and therefore most of the indicators in the index's SOE subcomponent were deemed not applicable. Regulation concerning its governance is not fully completed and users of the index should note this when reviewing the company's performance.*

Sovereign wealth funds

Country	Sovereign wealth fund	Asset value (USD millions, selected years)	Score [/100]
Colombia (mining)	Savings and Stabilization Fund	3,240	100
Colombia (oil and gas)	Savings and Stabilization Fund	3,240	100
Ghana (oil and gas)	Ghana Stabilization Fund	208	93
Chile	Economic and Social Stabilisation Fund	13,966	92
Norway	Government Pension Fund Global	926,940	90
Timor-Leste	Petroleum Fund	16,238	88
Canada (Alberta)	Alberta Heritage Savings Trust Fund	17,900	88
Trinidad and Tobago	Heritage and Stabilization Fund	5,880	74
Iran	National Development Fund of Iran	53,307	70
Peru	Fiscal Stabilization Fund	7,904	69
Kazakhstan	National Fund of Kazakhstan	62	67
Botswana	Pula Fund	6,040	65
Australia (Western)	Western Australian Future Fund	300	61
Kuwait	Kuwait Investment Authority	524,000	61
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	33,600	52
Oman	State General Reserve Fund	34,000	47
Mexico (oil and gas)	Oil Revenues Stabilization Fund	5,901	45
Malaysia	National Trust Fund	3,019	42
Mongolia	Fiscal Stability Fund	250	42
Russia	National Wealth Fund	73,570	40
Uganda	Petroleum Revenue Investment Reserve	72	36
Libya	Libyan Investment Authority	67,000	32
Bahrain	Future Generations Reserve Fund	400	32
Angola	Fundo Soberano de Angola	4,882	25
Gabon	Fonds Souverain de la République Gabonaise, Fonds Gabonais d'Investissements Stratégiques	1,000	23
Venezuela	Fondo de Desarollo Nacional	17,250	22
United Arab Emirates	Abu Dhabi Investment Authority	589,800	21
Algeria	Fonds de Régulation des Recettes	7,570	21
Saudi Arabia	SAMA Foreign Holdings	514,000	18
Chad	Mécanisme de stérilisation des revenus pétroliers provenant de l'exploitation des trois champs de Komé, Miandoum et Bolobo	Not available	17
Equatorial Guinea	Fund for Future Generations	80	7
Sudan	Oil Revenue Stabilisation Account	Not available	7
Nigeria	Excess Crude Account	2,400	4
Qatar	Qatar Investment Authority	338,400	4

Note: Assets under management as of 2015 or 2016, depending on the country

Transparency and civic space

The index measures two important ingredients for citizens seeking to hold their governments to account: transparency and "civic space," the freedom and ability of citizens to influence the political and social structures around them.

Transparency

The index measures the extent and quality of disclosures across all of the main policy aspects of extractive resource management. Three types of disclosures are of particular importance: payments made to governments, the identities of individuals who personally benefit from companies with which the government does business, and the deals governments and companies strike.

Information about payments from companies to governments is crucial for citizens, journalists and parliamentarians seeking to learn how much money their government has to spend, whether companies pay what they owe in taxes and whether extractive projects benefit the country. The granularity of this information determines its usefulness. The index measures payments disclosed on a company-specific basis. In about half of the countries in the index, the government discloses payments by aggregating all transfers from a company to the government. However, regarding more granular information, previous NRGI analysis indicates that project-level reporting—disclosures of how much money flows to the government from individual extraction sites—is much rarer.

Most company-specific disclosures were in countries party to the Extractive Industries Transparency Initiative (EITI), which suggests that EITI has led the way internationally on company payment transparency—but countries still have work to do to advance project-level transparency.

If citizens are to know whether companies use corporate structures to avoid taxes and whether officials have personal interests in the companies they regulate, it is necessary for government officials and companies to disclose information about a range of commercial interests. The index measures two such disclosures: reporting of government officials' financial assets in companies, and disclosures of the identities of "beneficial owners" of companies — the individuals who ultimately control or profit from corporate activity. The index shows that in the majority of cases, laws require public officials to disclose their financial assets, either publicly or to a government authority. But only 11 of the index's 89 assessments show that officials publish this information comprehensively and publicly. Public information on beneficial ownership is also scant. While many countries at least plan to require public disclosure of this information (often due to EITI processes in these countries), only five countries assessed currently have laws requiring public beneficial ownership disclosures and even fewer countries have public registries containing this information. Even in countries where beneficial ownership laws or disclosures do exist, further refinements are needed to make the rules and implementation most effective.

Citizens should know the terms on which extraction occurs in their country; these terms are documented in contracts and license agreements. In only 22 of 89 assessments did researchers find rules requiring contract and license disclosure. Contract disclosure rules are most common in sub-Saharan Africa and least common in Eurasia, Western Europe and North America. And the index confirms that having a disclosure rule increases the frequency of contract disclosure. Among the 22 country settings with disclosure rules, governments in 16 have disclosed at least some contracts. In contrast, in only 18 out of 67 assessments without disclosure rules did governments publish contracts.

Civic space

Without an active and well-informed civil society to monitor and evaluate the information, the impact of technical disclosures, like those of contracts and licenses, is somewhat neutralized. This necessitates a second ingredient—"civic space," including citizens' freedom to use disclosures to hold their governments accountable. There are some governments that have made some progress in technical disclosures, yet heavily restrict civic space, as in Azerbaijan, China and Vietnam. They publish a reasonable amount of information, but these countries are marked by very poor voice and accountability metrics, which measure the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and freedom of the press. Until journalists and citizens can use information for public debate and to query governments, transparency will not translate into accountability and hence the full benefits of extraction will remain unrealized.

Worse, in most countries the absence of civic space comes hand-in-hand with opacity and poor sectoral governance performance. The index results suggest that on average governments that facilitate civic space do exhibit stronger governance performance. Indeed, more than any other of the index's enabling environment subcomponents, voice and accountability is strongly associated with country performance in the extractives-specific value realization and revenue management components.

Countries with good or satisfactory voice and accountability perform better in value realization and revenue management

Recommendations

The index results point to a number of common challenges for countries and the global community. Addressing these challenges requires a range of responses. Here are six that are globally significant.

1 Focus on implementation

Governments should strengthen the implementation of laws and regulations in extractives—particularly in areas where practice has been found to be lagging, such as those related to the environment, local communities and subnational resource revenue sharing. While significant progress is also needed in the adoption and improvement of laws and regulations in the extractive industries of many countries, the ultimate challenge is *implementing* these laws and regulations.

2 Continue to open governments

Countries have made significant progress in some areas of transparency, such as company payment disclosures—but more is necessary if data are to be comprehensive and granular enough to inform policy debates and decisions. The next steps are to shed light on the true beneficial owners of companies, the commercial interests of officials and their associates, the deals governments make, and the detailed project-level payments companies make to governments.

3 Bolster state-owned enterprise governance

Given SOEs' weaknesses in most settings and their prominent role in resource-rich countries, major reform is needed. The biggest weakness in state enterprises, according to the index, is the regulation and disclosure of oil sales. Further, their corporate governance is in need of improvement. SOE officials may wish to draw from practices of the best-performing state companies assessed by the index. Such practices include establishing independent governing boards; making appointments according to well-defined, meritocratic processes; and emphasizing technical expertise rather than political patronage.[15]

4 Protect civic space and combat corruption

The analysis clearly shows that the challenges in extractives are not only technical. Where citizens' ability to participate in selecting and monitoring their government, their freedom of expression, and their freedom of association is limited, governance of the extractives sector is fundamentally impaired. A concerted effort to open civic space is needed in most resource-rich countries, where citizens and journalists lack freedoms to speak up and hold their governments to account. And in countries where the enabling environment is lacking in areas such as rule of law, regulatory quality and corruption control, laws specific to the extractives sector will have limited impact in practice.

5 Strengthen global norms and institutions

Governments of countries home to extractive companies, international institutions and non-governmental organizations should work to further strengthen the global framework for natural resource governance, including influencing how multinational companies behave. With delay and uncertainty on implementation of the U.S. law requiring mandatory disclosure of project-level payments to governments, it is even more important that jurisdictions like the E.U. and Canada hold firm with their laws and enhance them by including transactions related to commodities trading.[16] Further, the OECD Anti-Bribery Convention ought to be safeguarded, and goverments should honor the commitments they made at the 2016 U.K. Anti-Corruption Summit. Global initiatives such as EITI that are making a difference in key areas of transparency need to make further progress in

helping countries to institutionalize extractives governance reforms within country systems and also in making companies more accountable. International financial institutions and multilateral development banks should fully integrate resource transparency—including in contracts and payments—in their lending criteria.

6 Use data to drive reforms

The index is just one of a growing number of datasets that researchers, policy analysts, advocates and reformers can use to understand and drive change across the world. Among these are ResourceProjects.org and ResourceContracts.org. The open data revolution is making these data more accessible; the challenge now is to use them to help inform better policy decisions and improve governance and corruption control. To that end, governments, think tanks, the media and civil society organizations should: measure and monitor the quality of governance and effectiveness of resource and revenue management throughout the "value chain"; design measures to improve institutions, policies and practices based on such evidence-based assessments; and fund the development of institutional systems providing regular and timely gathering, analysis and dissemination of key data in resource-rich countries. The power of data can also be further unleashed in helping countries tailor their reform program plans to their realities in an evidence-based manner. The international community should ensure that public information about the resource sector is released in line with the Open Data Charter standards.

Endnotes

1 Number of people in poverty is calculated as the multiplication of the World Bank Poverty headcount ratio at USD 3.10 a day (latest available data) with *World Bank Population, total* (2015) for all countries, summing the countries included in the index and dividing by world the sum of all countries. Sources for data available from: www.resourcegovernanceindex.org

2 Oil, gas and mineral production shares included in the index are calculated as a sum of country production data (sources for data available from: www.resourcegovernanceindex.org) in 2016, divided by global production in 2016. For jurisdictions—Australia (Western), Canada (Alberta) and United States of America (Gulf of Mexico)—only production from that jurisdiction is included. Production of each of the eight mined commodities is included if the sector assessed is mining; production of mined commodities is not included if the sector assessed is oil and gas and vice-versa.

3 The enabling environment component of the index is comprised of the six Worldwide Governance Indicators (voice and accountability; political stability and lack of violence; government effectiveness; regulatory quality; rule of law; and control of corruption) and a seventh open data subcomponent, comprised of the Global Open Data Index, Open Data Barometer and Open Data Inventory. For the methodological details of the six governance indicators, see Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi. The Worldwide Governance Indicators: Methodology and Analytical Issues. World Bank Policy Research Working Paper No. 5430. September 2010.

4 Andrew Warner, "Natural Resource Booms in the Modern Era: Is the curse still alive?" International Monetary Fund Working Paper No. 15/237 (2015).

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16 Daniel Kaufmann, "Trump should think again on mining transparency law." *Financial Times*. 8 March 2017.

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