JULY 2023

NTI NUCLEAR SECURITY INDEX

Theft / Sabotage / Radiological

Falling Short in a Dangerous World

NTI
BUILDING A SAFER WORLD

Index developed with

ECONOMIST IMPACT

The 2023 NTI Nuclear Security Index

The 2023 NTI Nuclear Security Index (NTI Index) assesses the security of some of the world's most dangerous materials—highly enriched uranium (HEU) and plutonium—against theft and the security of nuclear facilities against acts of sabotage. Stolen HEU or plutonium could be used to build a nuclear bomb; sabotage of a nuclear facility could result in a dangerous release of radiation.

Developed in partnership with Economist Impact and informed by an international panel of respected nuclear security experts, the Nuclear Security Index uses publicly available information to track country- and area-level progress on nuclear security and it recommends actions for governments to protect nuclear materials and facilities and to strengthen the global nuclear security architecture. The Nuclear Security Index includes two theft rankings and one sabotage ranking:

- **Theft: Secure Materials**—A ranking of 22 countries with 1 kilogram or more of weapons-usable nuclear materials—HEU and separated plutonium—to assess actions to secure materials against theft.
- **Theft: Support Global Efforts**—A ranking of 153 countries and Taiwan with less than 1 kilogram of or no weapons-usable nuclear materials to assess actions to support global nuclear security efforts.
- **Sabotage: Protect Facilities**—A ranking of 46 countries and Taiwan with or without weapons-usable nuclear materials, but which have nuclear facilities, such as nuclear power reactors and research reactors, to assess actions to protect those facilities against sabotage.

The 2023 NTI Index includes a separate Radioactive Source Security Assessment that assesses national policies, commitments, and actions across 175 countries and Taiwan to secure radioactive sources and prevent a dirty bomb. The assessment does not score or rank countries and areas.

Data visualizations, detailed scores, updates, and further analysis are available at **www.ntiindex.org**.

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SIXTH EDITION

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NTI owes a deep debt of gratitude to the International Panel of Experts who advise on the development of the NTI Index. Each panel member is highly respected, and the composition of the panel ensures that a diverse range of global perspectives informs the design of this assessment. Panel members' willingness to share their knowledge of complex issues and engage in productive debate makes our work possible.

We greatly appreciate the many government officials and experts who participated in briefings and who took the time to review and comment on the data gathered by EI. Their input makes the NTI Index as accurate and up-to-date as possible.

Additionally, we would like to thank the NTI Board of Directors for its support. We are particularly grateful for the generous grant from the Peter G. Peterson Foundation that supports the 2023 edition of the NTI Index.

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Foreword

NTI Co-Chair and CEO Ernest J. Moniz

Two years after the onset and rapid spread of a global pandemic that taught the world a powerful lesson about the need for prevention, preparation, and accountability, Russia's army willfully endangered nuclear power plants in Ukraine, putting the entire region at risk of a devastating radiological release. The shocking developments at Chornobyl and Zaporizhzhia, followed by dramatic events in Russia that raised alarms about the government's control of its nuclear arsenal, underscore the urgent need to protect nuclear facilities and materials around the world. Today, the threats to nuclear security are escalating—from theft and sabotage to powerful storms fueled by climate change and, as made painfully clear over the past year and a half, to political instability and war.

At a time of dramatic deterioration in global stability and order with political and social unrest paving the way for new forms of violent extremism, the world now likely faces a growing risk that malicious actors could obtain the materials necessary to fashion a nuclear weapon or a dirty bomb. And all of this is occurring while overall stockpiles of weapons-usable nuclear materials are increasing at an alarming rate.

For the first time since the Nuclear Threat Initiative (NTI) began working with Economist Impact more than a decade ago to collect data from 175 countries and Taiwan for the NTI Nuclear Security Index, nuclear security is regressing in countries and areas with the greatest responsibility for preventing nuclear theft or sabotage—those with weapons-usable nuclear materials and nuclear facilities.

This troubling trend of countries and areas neglecting their responsibility to uphold global nuclear security is also playing out across the nuclear non-proliferation regime as disarmament efforts among countries with nuclear weapons have come to a halt and some states are working to modernize and expand their arsenals. Against today's volatile backdrop—Russia's aggression, Iran's nuclear ambitions, North Korea's provocations, cyber threats to nuclear

systems, and more—even some countries without weapons-usable nuclear materials are openly debating developing their own arsenals.

This diminishing commitment to reducing nuclear risks is deeply disturbing. Indeed, it is unraveling hard-fought progress on nuclear security dating back to the end of the Cold War when the United States and Russia worked together to remove and secure weapons-usable nuclear materials left in former Soviet territory. Risk-reduction work increased through biennial Nuclear Security Summits from 2010 to 2016 that brought renewed attention to nuclear dangers and secured commitments from scores of countries to eliminate and better secure their nuclear materials and take steps to prevent their countries from becoming safe havens, staging grounds, or transit routes for illicit nuclear activities. In recent years, this important work has stalled. Now, we see nuclear security regressing for the first time.

The 2023 NTI Index finds a host of troubling developments. Among them, countries and areas with weapons-usable nuclear materials and nuclear facilities have made almost no progress since 2020 toward improving security culture and insider threat prevention; stocks of weapons-usable plutonium at civilian nuclear facilities have grown rapidly; 34% of countries and areas with nuclear facilities have no regulatory requirements in place for protecting nuclear infrastructure during a natural or human-caused disaster; in those same countries and areas, support for political and legal commitments to improve security is faltering; support for the role of the International Atomic Energy Agency (IAEA)—the world's leading agency with a mission to prevent nuclear proliferation and strengthen the global framework for nuclear safety and security—is inconsistent; and minimal progress has been made on securing radioactive sources against those who might steal them to build radioactive dirty bombs.

These findings are extremely disappointing. In any country or area, inattention to nuclear risks or uneven adherence to processes and regulations imperils our security. A single act of nuclear terrorism would have devastating political, humanitarian, and economic consequences that would reverberate around the world. It would also undermine civil nuclear energy and the important role it plays in mitigating climate change.

Not all the news is bad. Although stockpiles of civil plutonium are on the rise, the 2023 NTI Index's findings suggest that global norms against civilian use of highly enriched uranium—which can also be used to make nuclear weapons—are solidifying as inventories gradually decline. The data also reveal an increase in the number of countries that are fulfilling key legal obligations to effectively protect nuclear materials and facilities.

It also is heartening that the NTI Index shows that progress is possible over time. Present challenges notwithstanding, countries have made significant progress since the first NTI Index, released in 2012, tracked and reported on nuclear security conditions worldwide. Even last year saw a significant achievement when more than 100 countries participated in the first-ever review of the only international treaty that legally obligates countries to implement security measures for civilian nuclear materials. Countries that signed up to that treaty—the amended Convention on the Physical Protection of Nuclear Material—emerged from the review having reached consensus on a path forward and expressing a clear desire to drive progress.

This is not the first time the world has faced great risks. Governments, international institutions, industry, and civil society, with the support of visionary leaders, have risen to meet moments of great peril in the past. In this new era of instability, it is crucial that the global nuclear security architecture be fortified to prevent nuclear catastrophe. Leaders have an obligation to rise to this challenge. It is time for them to step up to the task.

Ernest J. Moniz
Co-Chair and Chief Executive Officer
Nuclear Threat Initiative

Executive Summary

Falling Short in a Dangerous World

A Russian all-terrain armored vehicle is parked outside the Zaporizhzhia Nuclear Power Plant during a visit of the IAEA in September 2022.

After years of reporting flagging progress on nuclear security, the NTI Nuclear Security Index for the first time in 2023 finds that nuclear security conditions are regressing in the dozens of countries and areas with weapons-usable nuclear materials and nuclear facilities.

Although all countries and areas have a responsibility to take steps to prevent a lapse in nuclear security that could lead to thefts or acts of sabotage, the onus is greater on those that possess materials that could be used to build a weapon and facilities from which a nuclear or radiological release could have devastating consequences. Too many of these countries and areas have neglected their obligation to improve the security of some of the world's most sensitive materials and facilities at a time when risk environments are growing ever more dangerous and unpredictable. Instead, they have deprioritized high-level international engagement on issues related to nuclear security and backtracked on confidence-building and information-sharing practices that are important elements of a healthy global nuclear security architecture. France, India, Iran, Israel, North Korea, Pakistan, Russia, and the United Kingdom actually increased their stocks of weapons-usable nuclear materials.

The bottom line is that the countries and areas with the greatest responsibility for protecting the world from a catastrophic act of nuclear terrorism are derelict in their duty. This is a particularly disheartening development with geopolitical and economic instability, violent non-state actors, environmental disasters, and cyber attacks all on the rise. As the global risk environment worsens, it is imperative that countries and areas with weapons-usable nuclear materials and nuclear facilities exhibit dependable stewardship of global nuclear security by implementing the highest possible levels of security within their own borders.

Amid many discouraging findings, the 2023 NTI Index finds pockets of progress; for example, global inventories of highly enriched uranium are gradually declining. Countries and areas can do better. It is time for governments and industry to take immediate action.

The NTI Index is recognized as the premier resource and tool for tracking progress on global nuclear and radiological security across 175 countries and Taiwan. Due to its independent regulatory structure and cooperative activities with the International Atomic Energy Agency (IAEA), Taiwan is evaluated in the NTI Index.[1]

Now in its sixth edition, the NTI Index is developed in partnership with Economist Impact. It comprises three dynamic and comprehensive rankings that assess the nuclear security conditions in

(a) 22 countries with 1 kilogram or more of weapons-usable nuclear materials (highly enriched uranium or separated plutonium) and the policies, actions, and other factors related to securing those materials against the risk of theft;

(b) 153 countries and Taiwan with less than 1 kilogram of or no weapons-usable nuclear materials and the policies, actions, and other factors related to their support for global nuclear security efforts; and

(c) 46 countries and Taiwan with nuclear facilities where sabotage could result in a dangerous release of radiation and the policies, actions, and other factors related to protecting nuclear facilities against the risk of sabotage.

For the second time, the 2023 NTI Index also includes a Radioactive Source Security Assessment that evaluates—but does not score or rank—national policies, commitments, and actions to secure radioactive sources and prevent a dirty bomb in 175 countries and Taiwan. Radiological security has suffered from a lack of political attention in recent years, leaving many radioactive sources more vulnerable to theft than weapons-usable nuclear materials. Consistent with that trend, this year, the data show that countries and areas have made minimal progress on radioactive source security and are not sufficiently adhering to baseline radiological security measures.

Key Facts about the NTI Index

- **Serves as an objective assessment of nuclear security conditions around the world**
- **Data gathered from publicly available information**
- **Researched by Economist Impact**
- **Advised by an international panel of experts**
- **Government input provided through data confirmation**

[1] In data findings, recommendations, and broad statements that include Taiwan, the NTI Index uses either "countries and Taiwan" or "countries and areas"; when Taiwan is not included, the NTI Index uses the term "countries."

> The bottom line is that the countries and areas with the greatest responsibility for protecting the world from a catastrophic act of nuclear terrorism are derelict in their duty.

Top Nuclear Security Index and Radioactive Source Security Assessment Findings and Recommendations

FINDING **Civil stockpiles of separated plutonium are growing rapidly, with the biggest increases coming from commercial reprocessing.** To stem the growth of these stockpiles, countries must cap separated plutonium inventories at current levels and those with existing inventories need to reduce their stockpiles as much and as quickly as possible. Countries and areas with nuclear facilities must champion practical non-weapons-usable alternatives to plutonium and avoid nuclear energy technologies that involve a plutonium fuel cycle.

FINDING **Global inventories of highly enriched uranium (HEU) are continuing to gradually decline as global norms against civilian use of HEU solidify.** All countries and areas must cement these norms in clear political commitments, laws, or regulations. Countries and areas with HEU facilities can additionally contribute to the decline of HEU inventories by adopting low-enriched uranium alternatives and eliminating excess HEU inventories.

FINDING **Amid increasingly volatile risk environments, many governments are not demonstrating the capacity to meet today's nuclear security challenges.** Governments, especially in countries and areas with nuclear materials and facilities, must prioritize nuclear security amid periods of heightened instability, carefully consider the ramifications that potentially inflammatory policy decisions have on nuclear security, and require nuclear operators to increase the resiliency of facilities.

FINDING **Countries and areas with weapons-usable nuclear materials and nuclear facilities made no progress in two crucial and mutually reinforcing areas of nuclear security: security culture and insider threat prevention.** Governments must intensify their efforts to establish and strengthen programs for identifying and mitigating insider threats, but state action alone is not enough to address this vulnerability. Nuclear operators must create programs to strengthen security culture; regulators, intelligence organizations, law enforcement, industry, and non-governmental organizations must increase information sharing around nuclear security incidents; and civil society organizations must demand and support stronger nuclear security around the world.

FINDING **Among the 46 countries and Taiwan with nuclear facilities, support for new political and legal commitments and international assurances is faltering.** Governments must prompt a resurgence of international cooperation by revitalizing the Global Initiative to Combat Nuclear Terrorism and organizing new global or regional head-of-state-level summits focused on reducing the risk of nuclear sabotage or theft. Governments should demonstrate leadership on this front by making voluntary political commitments to engage in such multilateral initiatives and nuclear security peer reviews.

FINDING **The number of countries fulfilling their outstanding obligation to effectively protect nuclear materials and facilities has nearly doubled.** Seventy-three states-parties are fulfilling their obligation under the amended Convention on the Physical Protection of Nuclear Material (CPPNM); the 58 states-parties to the amended CCPNM that are not in compliance with the treaty must address and rectify the issues preventing their compliance.

FINDING **Countries in the Global South have made the biggest improvements to their nuclear security conditions, though there is still significant work to be done.** They must ratify the amended CPPNM if they have not done so already and subscribe to the IAEA's nuclear security information circulars. Nuclear security practitioners should support this promising trend by advancing an inclusive narrative about the universal benefits of strong and sustainable nuclear security and the important role of every country and area in creating and maintaining a durable and resilient global nuclear security system.

FINDING **Despite volatile risk environments and growing interest in nuclear energy, support for the IAEA's role in nuclear security is inconsistent.** Countries and areas must resolve to underpin this critical institution by contributing financial and human resources to its nuclear security mission and to promote its importance and legitimacy by participating in the IAEA's Nuclear Security Guidance Committee and the International Conference on Nuclear Security's 2024 meeting.

FINDING **Since 2020, countries and areas have made minimal progress on radioactive source security and are not sufficiently adhering to baseline radiological security measures.** Countries and areas must make radiological security a bigger priority by establishing regulatory measures to track and control the movement of radioactive sources, enacting basic laws to protect radioactive sources from theft, replacing high-activity radioactive sources, and implementing the IAEA's Guidance on the Management of Disused Radioactive Sources.

Results Tables

The tables on the following pages show the high-level results of the three Nuclear Security Index rankings and the Radioactive Source Security Assessment. The Nuclear Security Index tables show overall and category ranks and scores. The Radioactive Source Security Assessment does not rank or score countries or areas. Instead, the percentage of countries and areas receiving each answer choice is shown. More detailed results are available in Excel models at **www.ntiindex.org**.

Theft: Secure Materials

OVERALL SCORE

Rank / 22		Score / 100	Change since 2020	Change since 2012
1	Australia	93	-1	+14
2	Switzerland	91	-1	+16
3	Canada	89	+1	+21
4	Germany	87	+2	+18
5	Netherlands	84	0	+14
6	Norway	83	-1	+12
7	Belgium	82	+3	+19
8	Japan	80	+2	+30
=9	Italy	77	0	+17
=9	United Kingdom	77	0	+9
11	United States	74	-2	+8
12	China	67	+2	+22
=13	France	66	-4	+6
=13	Kazakhstan	66	-2	+12
15	Belarus	62	-2	+3
16	South Africa	58	+1	+2
17	Israel	54	0	+7
18	Russia	53	-3	+2
19	Pakistan	49	+3	+18
20	India	40	0	+7
21	Iran	29	-3	-3
22	North Korea	18	0	-5

1. QUANTITIES AND SITES

Rank / 22		Score / 100	Change since 2020	Change since 2012
=1	Australia	94	0	-1
=1	Switzerland	94	-6	+19
3	Norway	89	0	-5
=4	Canada	76	+4	+9
=4	Germany	76	+4	+9
=6	Belarus	75	0	-6
=6	South Africa	75	0	-6
=8	Belgium	72	0	+11
=8	Kazakhstan	72	0	+5
=10	Italy	70	0	-6
=10	Netherlands	70	0	-5
12	Iran	52	-37	-37
13	Japan	42	0	+18
14	China	33	0	0
=15	Israel	28	0	-19
=15	North Korea	28	-5	-23
17	United States	25	0	0
=18	Pakistan	19	0	0
=18	Russia	19	0	-6
=20	France	14	-19	-30
=20	India	14	-5	-5
=20	United Kingdom	14	0	0

2. SECURITY AND CONTROL MEASURES

Rank / 22		Score / 100	Change since 2020	Change since 2012
1	United Kingdom	96	0	+15
2	Canada	91	0	+26
=3	Australia	89	0	+27
=3	United States	89	0	+6
5	Switzerland	87	+1	+19
6	Germany	82	0	+27
7	Belgium	81	+5	+36
=8	China	80	0	+39
=8	Netherlands	80	0	+27
=10	Italy	78	0	+25
=10	Japan	78	+4	+23
12	Belarus	72	0	+18
13	Russia	70	0	+17
14	France	63	-1	+3
15	Norway	61	+4	+23
=16	Kazakhstan	57	0	+14
=16	Pakistan	57	0	+41
=18	India	44	0	+6
=18	Israel	44	0	0
20	South Africa	36	0	+4
21	North Korea	27	0	0
22	Iran	26	0	0

Overall and category scores and ranks for 2023 are shown.
In the NTI Index, scores of 0 and 100 represent the lowest or highest possible score, respectively, as measured by the NTI Index criteria.
Scores are normalized (0–100, where 100 = most favorable nuclear materials security conditions).
= denotes tie in rank.

Theft: Secure Materials *(cont'd)*

3. GLOBAL NORMS

Rank / 22		Score / 100	Change since 2020	Change since 2012
1	Japan	99	0	+37
2	Australia	95	-5	+31
3	United Kingdom	94	+1	+21
4	United States	93	-1	+31
5	Canada	91	0	+35
6	Germany	90	-1	+21
=7	Belgium	88	0	+26
=7	Netherlands	88	0	+21
=9	Norway	87	-3	+26
=9	Switzerland	87	+3	+27
=11	France	82	0	+28
=11	Kazakhstan	82	-2	+26
13	Italy	81	0	+31
14	China	65	-2	+18
15	India	64	-1	+25
16	Israel	53	0	+21
17	Belarus	50	+2	+10
18	Russia	49	-6	-3
19	South Africa	46	-5	-4
20	Pakistan	44	-1	+9
21	Iran	26	-2	+8
22	North Korea	0	0	0

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 22		Score / 100	Change since 2020	Change since 2012
=1	Australia	100	0	+11
=1	Belgium	100	+11	+22
=1	Canada	100	0	+27
=1	China	100	+11	+26
=1	France	100	0	+22
=1	Germany	100	0	+11
=1	Italy	100	0	+22
=1	Japan	100	0	+69
=1	Netherlands	100	0	+16
=1	Norway	100	0	+16
=1	Pakistan	100	+11	+27
=1	Russia	100	0	+5
=1	Switzerland	100	0	+11
=1	United Kingdom	100	0	0
=1	United States	100	0	+22
16	Kazakhstan	95	0	+16
17	Israel	90	-5	+22
=18	Belarus	78	0	+5
=18	South Africa	78	0	0
20	India	36	0	0
21	Iran	25	+20	+20
22	North Korea	5	+5	+5

5. RISK ENVIRONMENT

Rank / 22		Score / 100	Change since 2020	Change since 2012
1	Australia	89	-1	-3
2	Germany	88	+4	+17
=3	Norway	86	-12	-12
=3	Switzerland	86	-5	-6
5	Canada	85	-1	+3
6	Netherlands	82	-2	0
7	Japan	79	+1	-2
8	France	78	+5	+12
9	United Kingdom	74	-2	+8
10	Belgium	67	-4	-14
11	South Africa	64	+8	+14
=12	Israel	58	+1	+12
=12	United States	58	-5	-18
14	Italy	55	+5	+9
15	China	49	+5	+16
16	India	41	+5	+12
17	North Korea	28	-3	-6
18	Belarus	26	-13	-23
19	Kazakhstan	23	-10	0
20	Pakistan	21	+8	+5
21	Russia	17	-9	-7
22	Iran	16	+4	-6

Overall and category scores and ranks for 2023 are shown.
In the NTI Index, scores of 0 and 100 represent the lowest or highest possible score, respectively, as measured by the NTI Index criteria.
Scores are normalized (0–100, where 100 = most favorable nuclear materials security conditions).
= denotes tie in rank.

Theft: Support Global Efforts

OVERALL SCORE

Rank / 154		Score / 100	Change since 2020	Change since 2012
1	Finland	98	+2	+15
2	Sweden	97	-1	+15
3	South Korea	94	0	+21
4	Denmark	93	+1	+9
=5	Czech Republic	90	0	+15
=5	New Zealand	90	-6	+9
=7	Hungary	89	-1	+16
=7	Singapore	89	+2	+37
=7	Spain	89	-2	+12
=10	Jordan	87	0	+27
=10	Poland	87	0	+16
=10	Romania	87	-1	+18
13	Lithuania	85	-1	+12
=14	Chile	84	-1	+21
=14	Georgia	84	+12	+44
=14	Slovenia	84	+2	+6
17	Mexico	83	0	+23
18	United Arab Emirates	82	-1	+11
=19	Philippines	80	+5	+27
=19	Thailand	80	+6	+51
21	Luxembourg	79	0	+6
22	Armenia	78	-2	+17
23	Austria	77	0	+1
=24	Morocco	76	+2	+24
=24	Slovak Republic	76	-1	+3
=24	Ukraine	76	-1	+10
=27	Argentina	75	0	+15
=27	Estonia	75	-2	+6
=29	Cyprus	74	+1	+7
=29	Indonesia	74	0	+24
=29	Ireland	74	0	0
32	Latvia	73	-3	+3
33	Croatia	72	-3	+10
34	Portugal	71	-1	0
=35	Bulgaria	70	-1	+3
=35	Iceland	70	-3	+1
=35	Turkey	70	+2	+17
=38	Botswana	69	+7	+18
=38	Nigeria	69	-3	+31

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2020	Change since 2012
=1	Czech Republic	100	+6	+37
=1	Finland	100	0	+26
=1	Hungary	100	0	+43
=1	Jordan	100	0	+43
=1	Mexico	100	0	+49
=1	South Korea	100	0	+37
=1	Spain	100	0	+32
=1	Sweden	100	0	+37
=1	Poland	95	0	+32
=1	Ukraine	95	0	+27
=11	Georgia	94	-6	+43
=11	Romania	94	0	+31
=11	Lithuania	90	0	+27
=11	Armenia	89	0	+32
=11	Chile	89	0	+38
=11	Denmark	89	0	+21
=11	Morocco	89	-5	+38
=18	New Zealand	83	-12	+20
=18	Nigeria	83	-6	+49
=20	Philippines	83	+5	+32
=20	Thailand	83	0	+49
22	Indonesia	78	-6	+38
=23	Singapore	78	+5	+44
=23	Slovenia	78	+5	+15
25	United Arab Emirates	78	-6	+10
=26	Argentina	73	0	+22
=26	Turkey	73	+6	+33
28	Vietnam	73	-5	+50
29	Algeria	68	0	+22
=30	Austria	68	+5	+11
=30	Paraguay	68	0	+28
=30	Slovak Republic	68	0	+11
=30	Malaysia	66	0	+32
34	Azerbaijan	63	0	+17
35	Bangladesh	63	+6	+17
=36	Bosnia and Herzegovina	63	-5	+17
=36	Brazil	63	+6	+23
=36	Bulgaria	63	0	+6
=36	Croatia	63	-5	+6

Overall and category scores and ranks for 2023 are shown.
In the NTI Index, scores of 0 and 100 represent the lowest or highest possible score, respectively, as measured by the NTI Index criteria.
Scores are normalized (0–100, where 100 = most favorable nuclear materials security conditions).
= denotes tie in rank.

Theft: Support Global Efforts *(cont'd)*

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 154		Score / 100	Change since 2020	Change since 2012
=1	Albania	100	0	0
=1	Algeria	100	+17	+26
=1	Argentina	100	0	+9
=1	Austria	100	0	0
=1	Bosnia and Herzegovina	100	0	+9
=1	Brazil	100	0	0
=1	Bulgaria	100	0	0
=1	Croatia	100	0	+26
=1	Cuba	100	0	0
=1	Cyprus	100	0	0
=1	Czech Republic	100	0	0
=1	Denmark	100	0	0
=1	Estonia	100	0	0
=1	Finland	100	0	0
=1	Ghana	100	0	+34
=1	Greece	100	0	0
=1	Hungary	100	0	0
=1	Iceland	100	0	0
=1	Ireland	100	0	0
=1	Jamaica	100	0	+26
=1	Jordan	100	0	+17
=1	Latvia	100	0	0
=1	Lithuania	100	0	0
=1	Luxembourg	100	0	0
=1	Malta	100	0	+26
=1	Mexico	100	0	+9
=1	Moldova	100	0	+26
=1	New Zealand	100	0	0
=1	North Macedonia	100	0	+17
=1	Philippines	100	0	+26
=1	Poland	100	0	+9
=1	Portugal	100	0	0
=1	Romania	100	0	0
=1	Saudi Arabia	100	+26	+91
=1	Serbia	100	0	0
=1	Singapore	100	0	+57
=1	Slovak Republic	100	0	0
=1	Slovenia	100	0	0
=1	South Korea	100	0	0

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2020	Change since 2012
1	Singapore	95	0	0
2	Finland	93	+9	+13
3	Denmark	90	+1	-5
4	Sweden	89	-2	-8
5	New Zealand	88	-6	-4
6	Luxembourg	85	-1	-6
7	Brunei Darussalam	82	+1	+9
8	Bhutan	79	+6	+18
9	Seychelles	78	-2	+13
10	Iceland	77	-14	-8
=11	Barbados	76	-9	-8
=11	Estonia	76	0	+13
=13	Botswana	75	0	0
=13	Uruguay	75	-2	+5
=15	Bahamas	74	-2	-2
=15	Slovenia	74	-3	-5
=15	South Korea	74	-2	+14
=15	Taiwan	74	-3	+2
=19	Ireland	73	-2	+1
=19	Qatar	73	+4	+10
21	Mauritius	71	-1	+2
22	Cabo Verde	69	-3	-5
=23	Latvia	68	-2	+10
=23	United Arab Emirates	68	+5	+15
25	Austria	67	-8	-15
26	Chile	65	-4	-4
=27	Costa Rica	63	-4	-13
=27	Cyprus	63	+4	-5
=29	Namibia	62	+1	+3
=29	Portugal	62	-4	-10
=29	São Tomé and Príncipe	62	+3	+24
=29	Slovak Republic	62	-3	-8
33	Czech Republic	61	-9	-6
=34	Lithuania	60	-2	0
=34	Malaysia	60	-3	-3
=36	Oman	59	+6	+19
=36	Poland	59	+1	-1
=36	Romania	59	-5	+16
=39	Cuba	57	-2	-5

Overall and category scores and ranks for 2023 are shown.
In the NTI Index, scores of 0 and 100 represent the lowest or highest possible score, respectively, as measured by the NTI Index criteria.
Scores are normalized (0–100, where 100 = most favorable nuclear materials security conditions).
= denotes tie in rank.

Theft: Support Global Efforts *(cont'd)*

OVERALL SCORE

Rank / 154		Score / 100	Change since 2020	Change since 2012
=38	North Macedonia	69	+4	+15
=38	Qatar	69	+7	+18
=42	Brazil	68	+1	+8
=42	Malta	68	-3	+6
=42	Paraguay	68	-3	+18
=42	Saudi Arabia	68	+11	+37
=46	Algeria	67	+5	+15
=46	Cuba	67	-3	+4
=46	Ghana	67	-2	+15
=46	Uruguay	67	0	+12
=50	Jamaica	66	+1	+12
=50	Namibia	66	+3	+16
=52	Moldova	65	-3	+9
=52	Montenegro	65	-1	+10
=52	Serbia	65	-1	+6
=52	Seychelles	65	+5	+9
=56	Azerbaijan	64	-4	+27
=56	Bosnia and Herzegovina	64	-5	+9
=56	Costa Rica	64	-1	+7
=56	Greece	64	-3	-4
=56	Vietnam	64	-11	+37
=61	Mauritania	63	+3	+14
=61	Niger	63	+7	+14
=63	Albania	62	-3	+6
=63	Bahrain	62	+1	+8
=63	Dominican Republic	62	-2	+9
=63	Peru	62	-2	+10
=63	Uzbekistan	62	-3	+15
=68	Bangladesh	61	+7	+10
=68	Colombia	61	+16	+26
=68	Madagascar	61	+17	+27
=68	Mongolia	61	-1	+4
=68	Taiwan	61	-1	+8
=68	Tajikistan	61	+2	+13
=74	Côte d'Ivoire	59	+3	+40
=74	Gabon	59	+2	+8
=74	Kuwait	59	0	+31
=74	Kyrgyz Republic	59	+13	+32
=78	Cameroon	58	+2	+19

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2020	Change since 2012
=36	Cyprus	63	0	+17
=36	Libya	63	0	+12
=36	Madagascar	63	+6	+23
=36	Montenegro	63	0	+23
=36	Niger	63	+12	+17
=36	North Macedonia	63	+6	+17
=36	Panama	63	0	+12
=36	Uzbekistan	63	0	+17
48	Luxembourg	62	0	+16
=49	Bahrain	57	-6	+6
=49	Benin	57	+11	+46
=49	Côte d'Ivoire	57	+6	+40
=49	Estonia	57	-6	+6
=49	Kenya	57	0	0
=49	Kyrgyz Republic	57	0	+23
=49	Latvia	57	-6	0
=49	Malta	57	0	+11
=49	Mauritania	57	+6	+6
=49	Moldova	57	-6	0
=49	Peru	57	0	+17
=49	Portugal	57	0	+6
=49	Saudi Arabia	57	+6	+11
=49	Serbia	57	0	+11
=49	Tajikistan	57	+6	+17
=49	Cameroon	56	-5	+28
=49	Ireland	56	0	-1
=49	Albania	51	-6	+11
=67	Botswana	51	+11	+22
=67	Burkina Faso	51	+5	+17
=69	Cambodia	51	-6	+11
=69	Colombia	51	0	+11
=69	Comoros	51	+11	+17
=69	Costa Rica	51	+5	+17
=69	Cuba	51	-6	+11
=69	Dominican Republic	51	0	+5
=69	Gabon	51	0	+5
=69	Ghana	51	-6	+5
=69	Greece	51	-6	-6
=69	Iraq	51	-6	+34

Overall and category scores and ranks for 2023 are shown.
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Scores are normalized (0–100, where 100 = most favorable nuclear materials security conditions).
= denotes tie in rank.

Theft: Support Global Efforts *(cont'd)*

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 154		Score / 100	Change since 2020	Change since 2012
=1	Spain	100	0	0
=1	Sweden	100	0	0
=1	Taiwan	100	0	+17
=1	Tajikistan	100	0	+17
=1	Thailand	100	+17	+83
=1	Turkey	100	0	+9
=1	Ukraine	100	0	+9
=1	United Arab Emirates	100	0	+9
=48	Armenia	91	-9	0
=48	Azerbaijan	91	-9	+57
=48	Botswana	91	+8	+25
=48	Burkina Faso	91	0	+17
=48	Cameroon	91	+17	+25
=48	Chad	91	+25	+91
=48	Chile	91	0	+17
=48	Colombia	91	+57	+65
=48	Congo (Dem. Rep. of)	91	0	0
=48	Fiji	91	+17	+8
=48	Georgia	91	+48	+65
=48	Indonesia	91	+8	+17
=48	Kyrgyz Republic	91	+48	+74
=48	Malawi	91	+48	+91
=48	Mali	91	0	+17
=48	Mauritania	91	0	+34
=48	Mongolia	91	0	+8
=48	Montenegro	91	0	0
=48	Morocco	91	+17	+25
=48	Namibia	91	0	+8
=48	Niger	91	+8	+17
=48	Nigeria	91	0	+25
=48	Peru	91	0	+8
=48	Qatar	91	+17	+17
=48	Syrian Arab Republic	91	+57	+74
=48	Uruguay	91	+8	+17
=48	Uzbekistan	91	-9	+17
=75	Afghanistan	83	+9	+9
=75	Bahrain	83	+9	+17
=75	Bangladesh	83	+9	0
=75	Bolivia	83	-8	0

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2020	Change since 2012
=39	Dominican Republic	57	+4	+16
=39	Georgia	57	+2	+22
=39	Spain	57	-6	-8
=43	Ghana	56	+1	+11
=43	Hungary	56	-4	-14
=43	Kuwait	56	0	+16
46	Croatia	54	-4	-3
=47	Jamaica	53	-3	-2
=47	Senegal	53	-4	+5
49	Rwanda	52	-2	+8
50	Paraguay	51	+1	+13
=51	Malta	50	-13	-26
=51	Mongolia	50	-6	+2
=51	Saudi Arabia	50	+3	+18
=51	Zambia	50	+5	+5
=55	Argentina	49	0	+10
=55	Bulgaria	49	-2	+3
=57	Bahrain	48	+4	+3
=57	Philippines	48	+9	+19
=57	Sri Lanka	48	+3	+8
=57	Thailand	48	+1	+12
=61	Benin	47	-1	+10
=61	Indonesia	47	+1	+8
=61	Jordan	47	0	+8
=64	Eswatini	45	+2	+2
=64	Guyana	45	-2	+1
=64	Suriname	45	-4	-5
=64	Trinidad and Tobago	45	-1	+5
=64	Vietnam	45	-3	-3
=69	Belize	44	-8	-7
=69	Colombia	44	-4	+6
=69	Gabon	44	-3	0
=69	North Macedonia	44	+9	+11
=69	Panama	44	-6	+2
74	Greece	43	-4	-6
=75	Armenia	42	+3	+10
=75	Gambia, The	42	-5	+7
=77	Brazil	41	-3	-6
=77	Egypt	41	-2	+11

Overall and category scores and ranks for 2023 are shown.
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= denotes tie in rank.

Theft: Support Global Efforts *(cont'd)*

OVERALL SCORE

Rank / 154		Score / 100	Change since 2020	Change since 2012
=78	Malawi	58	+16	+34
=78	Malaysia	58	-1	+22
=78	Senegal	58	-4	+14
82	Burkina Faso	57	+1	+13
=83	Kenya	56	0	+2
=83	Rwanda	56	+7	+10
=85	Cabo Verde	55	+7	+12
=85	Fiji	55	+3	+2
=87	Ecuador	54	-3	+10
=87	Mali	54	-3	+5
=87	Tunisia	54	-1	+4
90	Libya	53	+1	+3
91	Congo (Dem. Rep. of)	52	+2	+4
=92	Mozambique	51	+7	+8
=92	Togo	51	+5	+32
=94	Bolivia	49	-6	+4
=94	Chad	49	+12	+37
=94	Panama	49	-2	+8
=97	Afghanistan	48	+3	+10
=97	Benin	48	+10	+31
=97	Nicaragua	48	-4	0
=97	Uganda	48	-4	+6
=101	Guatemala	47	-4	-2
=101	Tanzania	47	-4	+2
103	Zambia	46	+4	+24
104	Oman	43	+9	+18
=105	Cambodia	41	0	+12
=105	Lebanon	41	-2	-7
=105	Mauritius	41	0	+6
=105	Syrian Arab Republic	41	+18	+31
109	Lesotho	40	+2	+9
=110	Comoros	38	+7	+14
=110	El Salvador	38	-3	+2
=110	Sri Lanka	38	+1	+7
=110	Turkmenistan	38	-2	+1
114	Eswatini	37	-2	+11
=115	Djibouti	36	-1	+15
=115	Iraq	36	-3	+21
=115	Sudan	36	-7	+18

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2020	Change since 2012
=69	Jamaica	51	+5	+11
=80	Kuwait	51	0	+17
=80	Lesotho	51	+5	+11
=80	Malawi	51	+5	+22
=80	Mali	51	0	+5
=80	Namibia	51	+5	+28
=80	Qatar	51	0	+22
=80	Turkmenistan	51	0	0
=80	Zambia	51	0	+34
=80	Central African Republic	46	+6	+6
=80	Congo (Dem. Rep. of)	46	+6	+6
=80	Djibouti	46	+6	+23
=80	Ecuador	46	0	+12
=80	El Salvador	46	0	+6
=80	Iceland	46	0	+6
=80	Mongolia	46	0	0
=95	Oman	46	+12	+18
=95	Rwanda	46	+17	+17
=95	Senegal	46	-11	+17
=95	Seychelles	46	+6	+6
=95	Tunisia	46	0	+6
=95	Uruguay	46	-5	+12
=95	Afghanistan	40	-6	+6
=95	Chad	40	+11	+23
=95	Eswatini	40	-6	+6
=95	Fiji	40	0	0
=105	Guatemala	40	0	+6
=105	Lebanon	40	0	0
=105	Mozambique	40	+6	+6
=105	Nicaragua	40	0	+6
=105	Togo	40	+6	+17
=105	Zimbabwe	40	+17	+29
=105	Angola	34	+23	+23
=105	Bolivia	34	-6	+11
=105	Congo, Rep.	34	+11	+34
=105	Eritrea	34	+34	+34
=105	Guinea-Bissau	34	+11	+11
=116	Honduras	34	0	+6
=116	Mauritius	34	+6	+6

Overall and category scores and ranks for 2023 are shown.
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= denotes tie in rank.

Theft: Support Global Efforts *(cont'd)*

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 154		Score / 100	Change since 2020	Change since 2012
=75	Cabo Verde	83	+9	+26
=75	Costa Rica	83	-8	+9
=75	Côte d'Ivoire	83	0	+74
=75	Dominican Republic	83	-8	+9
=75	Ecuador	83	-8	+9
=75	Gabon	83	+9	+17
=75	Guatemala	83	-8	-8
=75	Kenya	83	0	+9
=75	Madagascar	83	+49	+66
=75	Mozambique	83	+17	+26
=75	Nicaragua	83	-8	0
=75	Paraguay	83	-8	+9
=75	Senegal	83	+9	+17
=75	Seychelles	83	+9	+9
=75	Tanzania	83	0	+9
=75	Togo	83	+9	+74
=75	Tunisia	83	0	+9
=75	Uganda	83	-8	+17
=97	Kuwait	74	0	+65
=97	Lebanon	74	0	0
=97	Libya	74	0	0
=97	Rwanda	74	0	0
=101	Sudan	66	-8	+57
=101	Vietnam	66	-25	+49
103	Malaysia	43	0	+26
=104	Benin	34	+17	+25
=104	Cambodia	34	+8	+17
=104	Central African Republic	34	+8	+25
=104	Egypt	34	+8	+17
=104	Ethiopia	34	-9	+17
=104	Iraq	34	-9	+17
=104	Lao PDR	34	+8	+17
=104	Panama	34	0	+8
=104	Sri Lanka	34	0	+17
=104	Zambia	34	+8	+25
=114	Brunei Darussalam	26	+9	+9
=114	Burundi	26	+9	+26
=114	Comoros	26	+9	+26
=114	Congo, Rep.	26	+9	+26

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2020	Change since 2012
79	El Salvador	40	0	0
=80	Lao PDR	39	+2	+2
=80	Tanzania	39	-4	-2
82	Mauritania	38	+2	+3
=83	Fiji	37	-10	-5
=83	Lesotho	37	-3	-17
=83	Moldova	37	-3	+3
=83	Montenegro	37	-5	0
=83	Samoa	37	-10	-5
=83	Solomon Islands	37	-10	-5
=83	Timor-Leste	37	-2	-2
=83	Tonga	37	-10	-5
=83	Vanuatu	37	-10	-5
=92	Albania	36	-3	+4
=92	Bolivia	36	-2	-2
=92	Peru	36	-7	0
=92	Serbia	36	-4	+1
=96	Côte d'Ivoire	35	+1	0
=96	Tunisia	35	-3	-2
=98	Mexico	34	+2	-3
=98	Morocco	34	-2	-4
=100	Azerbaijan	33	-5	+7
=100	Ecuador	33	-2	+8
=100	Guinea-Bissau	33	-8	-3
=100	Togo	33	-1	+9
=104	Mozambique	32	-4	-8
=104	Nepal	32	-4	0
=104	Uganda	32	-4	-6
=107	Angola	31	0	-7
=107	Bangladesh	31	+7	+7
=107	Djibouti	31	-3	-2
=107	Honduras	31	-5	+4
=107	Madagascar	31	-2	-13
=107	Papua New Guinea	31	-10	-1
=113	Liberia	30	-8	-6
=113	Niger	30	-1	+5
=115	Cambodia	29	-1	+6
=115	Comoros	29	-4	-5
=115	Malawi	29	-6	-14

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Theft: Support Global Efforts *(cont'd)*

OVERALL SCORE

Rank / 154		Score / 100	Change since 2020	Change since 2012
118	Central African Republic	34	+6	+8
119	Egypt	33	+4	+15
=120	Bahamas	31	-1	-1
=120	Brunei Darussalam	31	+3	+5
=120	Honduras	31	-4	+6
=123	Congo, Rep.	30	+7	+23
=123	Lao PDR	30	+3	+8
=123	Zimbabwe	30	+10	+20
=126	Guyana	29	+4	+5
=126	Trinidad and Tobago	29	+2	+3
=128	Angola	28	+13	+11
=128	Bhutan	28	+2	+5
=130	Barbados	27	-5	-2
=130	Eritrea	27	+14	+15
=130	Solomon Islands	27	-3	+4
133	Guinea-Bissau	26	+3	+7
134	Tonga	25	-2	-1
135	Ethiopia	24	-6	+5
=136	Burundi	23	0	+7
=136	Liberia	23	+1	+12
=136	Nepal	23	-1	+5
=136	São Tomé and Príncipe	23	+1	+11
=140	Guinea	22	+1	+9
=140	Myanmar	22	-6	+7
=140	Sierra Leone	22	-6	+3
=140	Yemen	22	+4	+8
=144	Belize	21	0	0
=144	Gambia, The	21	-1	+5
=146	Haiti	19	-3	0
=146	Suriname	19	-1	-1
=146	Vanuatu	19	-6	+1
149	Papua New Guinea	18	0	+5
=150	Samoa	17	-3	-1
=150	Venezuela	17	-7	-5
152	Timor-Leste	14	-6	-1
153	Equatorial Guinea	13	-2	+1
154	Somalia	6	-1	+5

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2020	Change since 2012
=116	Sri Lanka	34	0	0
=116	Uganda	34	0	+5
120	Yemen	34	0	+11
=121	Cabo Verde	29	+12	+12
=121	Guyana	29	+6	+6
=121	Myanmar	29	-5	+18
=121	Syrian Arab Republic	29	0	+18
=121	Taiwan	29	0	+6
=121	Tanzania	29	-5	0
=121	Egypt	28	+5	+17
=121	Sudan	28	-6	+5
=121	Burundi	23	-6	0
=121	Haiti	23	0	0
=121	Lao PDR	23	0	+6
=121	Liberia	23	0	+17
=121	Nepal	23	0	+6
=134	Solomon Islands	23	+6	+6
=134	Trinidad and Tobago	23	+6	+6
=134	Bahamas	17	-6	-6
=134	Ethiopia	17	0	+6
=134	Guinea	17	0	0
=134	Papua New Guinea	17	+11	+11
=140	Sierra Leone	17	-6	0
=140	Tonga	17	0	0
=140	Venezuela	17	-6	+6
=140	Belize	11	+5	+5
=144	Equatorial Guinea	11	0	0
=144	Gambia, The	11	0	0
=144	Vanuatu	11	0	+11
=144	Barbados	6	0	0
=144	Bhutan	6	0	0
=144	Brunei Darussalam	6	0	0
=144	Samoa	6	0	0
=144	São Tomé and Príncipe	6	0	0
=144	Somalia	6	0	+6
=144	Suriname	6	0	0
154	Timor-Leste	6	0	0

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= denotes tie in rank.

Theft: Support Global Efforts *(cont'd)*

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 154		Score / 100	Change since 2020	Change since 2012
=114	Djibouti	26	-8	+17
=114	El Salvador	26	-8	0
=114	Eswatini	26	0	+26
=114	Guinea	26	+9	+26
=114	Honduras	26	-8	+9
=114	Lesotho	26	0	+26
=114	Mauritius	26	-8	+9
=114	Myanmar	26	0	+9
=114	Oman	26	+9	+17
=114	Sierra Leone	26	-8	+9
=114	Solomon Islands	26	-8	+9
=114	Tonga	26	0	0
=114	Trinidad and Tobago	26	0	0
=114	Turkmenistan	26	-8	0
=114	Venezuela	26	-8	-8
=114	Zimbabwe	26	+9	+26
=134	Angola	17	+8	+8
=134	Bahamas	17	+8	+8
=134	Barbados	17	-9	0
=134	Belize	17	0	0
=134	Bhutan	17	0	0
=134	Eritrea	17	0	+8
=134	Gambia, The	17	0	+8
=134	Guyana	17	+8	+8
=134	Haiti	17	0	+8
=134	Liberia	17	+8	+17
=134	Nepal	17	0	+8
=134	Samoa	17	0	0
=134	São Tomé and Príncipe	17	0	+17
=134	Suriname	17	0	0
=134	Vanuatu	17	-9	-9
=134	Yemen	17	+8	+8
=150	Equatorial Guinea	9	0	+9
=150	Guinea-Bissau	9	0	+9
=150	Papua New Guinea	9	-8	0
=150	Somalia	9	0	+9
=150	Timor-Leste	9	-17	0

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2020	Change since 2012
=118	Congo, Rep.	28	-2	0
=118	Sierra Leone	28	-3	+2
=118	Turkey	28	-2	-4
=121	Burkina Faso	27	-4	+2
=121	Turkmenistan	27	-1	+2
=121	Uzbekistan	27	-1	+9
=124	Eritrea	26	-4	-13
=124	Guinea	26	-7	+6
126	Algeria	25	-1	-11
=127	Bosnia and Herzegovina	24	-7	-5
=127	Ethiopia	24	-13	-11
=127	Kyrgyz Republic	24	-7	-2
130	Equatorial Guinea	23	-5	-3
=131	Afghanistan	21	+12	+18
=131	Burundi	21	0	-3
=131	Kenya	21	-1	-3
=131	Nicaragua	21	-6	-9
=135	Cameroon	20	-4	-8
=135	Tajikistan	20	-2	-1
=137	Guatemala	18	-5	-7
=137	Zimbabwe	18	0	0
139	Nigeria	17	-2	+5
=140	Chad	15	-2	-3
=140	Congo (Dem. Rep. of)	15	-2	+5
142	Sudan	14	-7	-8
=143	Haiti	13	-15	-12
=143	Mali	13	-13	-11
=143	Ukraine	13	-4	-17
=146	Central African Republic	11	0	-9
=146	Iraq	11	+8	+3
148	Libya	9	+1	-8
149	Myanmar	8	-13	-13
150	Venezuela	7	-7	-20
151	Somalia	5	-4	+1
=152	Syrian Arab Republic	4	+4	+4
=152	Yemen	4	+4	0
154	Lebanon	3	-8	-29

Overall and category scores and ranks for 2023 are shown.
In the NTI Index, scores of 0 and 100 represent the lowest or highest possible score, respectively, as measured by the NTI Index criteria.
Scores are normalized (0–100, where 100 = most favorable nuclear materials security conditions).
= denotes tie in rank.

Sabotage: Protect Facilities

OVERALL SCORE

Rank / 47		Score / 100	Change since 2020	Change since 2016
1	Finland	94	+4	+7
2	Australia	93	-2	+10
3	Canada	91	-1	+9
4	United Kingdom	90	+1	+9
5	Switzerland	88	+1	+13
=6	Germany	86	+1	+14
=6	Netherlands	86	-1	+9
=6	Romania	86	+1	+7
9	Japan	85	+1	+8
=10	Czech Republic	84	+1	+8
=10	Hungary	84	0	+6
12	Belgium	83	+4	+10
=13	Norway	82	-2	+10
=13	Slovenia	82	+1	+8
=15	South Korea	81	+3	+12
=15	Sweden	81	0	+6
=15	United States	81	-2	+4
18	Poland	79	+2	+7
19	United Arab Emirates	78	-1	n/a
20	France	77	+1	+4
21	Bulgaria	76	-1	+12
22	China	75	+2	+21
23	Spain	73	-2	+7
=24	Armenia	72	+1	+11
=24	Slovak Republic	72	-1	+4
=24	Ukraine	72	+7	+13
27	Brazil	70	+11	+19
=28	Argentina	68	0	+7
=28	Indonesia	68	-1	+6
30	Jordan	67	+2	n/a
31	Kazakhstan	65	-4	+9
=32	Israel	61	-2	+7
=32	Pakistan	61	+4	+14
=32	Russia	61	-2	+1
35	Chile	59	-1	+7
36	South Africa	57	0	+1
37	Uzbekistan	54	-1	+3
=38	Morocco	53	-3	+5
=38	Taiwan	53	0	+1
=40	India	52	0	+6
=40	Mexico	52	-1	+9
=42	Algeria	50	+10	+11
=42	Peru	50	-2	+2
44	Bangladesh	48	+3	+10
45	Egypt	37	-2	+2
46	Iran	23	+2	+4
47	North Korea	17	0	+1

1. NUMBER OF SITES

Rank / 47		Score / 100	Change since 2020	Change since 2016
=1	Algeria	100	0	0
=1	Armenia	100	0	0
=1	Australia	100	0	0
=1	Bangladesh	100	0	0
=1	Bulgaria	100	0	0
=1	Chile	100	0	0
=1	Egypt	100	0	0
=1	Israel	100	0	0
=1	Jordan	100	0	n/a
=1	Mexico	100	0	0
=1	Morocco	100	0	0
=1	Peru	100	0	0
=1	Poland	100	0	0
=1	Slovenia	100	0	0
=1	United Arab Emirates	100	0	n/a
=1	Uzbekistan	100	0	0
=17	Argentina	80	0	0
=17	Brazil	80	0	0
=17	Czech Republic	80	0	0
=17	Finland	80	0	0
=17	Hungary	80	0	0
=17	Indonesia	80	0	0
=17	Iran	80	0	0
=17	Kazakhstan	80	0	0
=17	Netherlands	80	0	0
=17	North Korea	80	0	0
=17	Norway	80	0	0
=17	Pakistan	80	0	0
=17	Romania	80	0	0
=17	Slovak Republic	80	0	0
=17	South Africa	80	0	0
=32	Belgium	60	0	0
=32	Canada	60	0	0
=32	Germany	60	+20	+20
=32	India	60	0	0
=32	South Korea	60	0	0
=32	Spain	60	0	0
=32	Sweden	60	0	0
=32	Switzerland	60	0	0
=32	Taiwan	60	0	0
=32	Ukraine	60	0	0
=42	Russia	40	+20	+20
=42	United Kingdom	40	0	0
=44	China	20	-20	-20
=44	France	20	0	0
=44	Japan	20	0	0
47	United States	0	0	0

2. SECURITY AND CONTROL MEASURES

Rank / 47		Score / 100	Change since 2020	Change since 2016
1	United Kingdom	97	+2	+13
2	Finland	94	+6	+13
3	Canada	91	0	+10
4	Australia	89	0	+26
=5	Romania	88	+6	+8
=5	United States	88	0	+3
7	Switzerland	86	+2	+11
8	Hungary	83	0	0
9	Bulgaria	81	0	+24
10	Germany	80	0	+10
=11	Belgium	79	+6	+18
=11	China	79	0	+36
=11	Czech Republic	79	+3	+14
=14	Japan	77	+4	+6
=14	Netherlands	77	0	+11
16	Slovenia	75	+3	+12
17	Ukraine	73	+5	+12
18	Taiwan	70	0	+8
=19	Russia	67	0	0
=19	South Korea	67	+2	+8
=21	Brazil	65	+3	+25
=21	Jordan	65	0	n/a
=21	Norway	65	+4	+20
=21	Poland	65	0	+4
=21	Sweden	65	+4	+5
=21	United Arab Emirates	65	0	n/a
27	Armenia	63	0	+8
28	Indonesia	58	0	0
29	France	57	-2	-2
=30	Pakistan	56	0	+22
=30	Slovak Republic	56	0	+4
32	Spain	55	0	+6
33	Kazakhstan	53	0	+10
34	India	52	0	+7
35	Argentina	48	+3	+3
36	Peru	45	0	0
37	Uzbekistan	43	+2	+2
38	South Africa	40	0	0
39	Chile	37	+2	+2
40	Israel	36	0	0
41	Algeria	32	0	+2
=42	Iran	23	0	0
=42	North Korea	23	0	0
44	Mexico	21	0	0
45	Egypt	19	0	0
46	Bangladesh	17	0	0
47	Morocco	16	0	0

Overall and category scores and ranks for 2023 are shown. All countries are scored 0–100, where 100 = most favorable nuclear security conditions.
= denotes tie in rank.

Sabotage: Protect Facilities *(cont'd)*

3. GLOBAL NORMS

Rank / 47		Score / 100	Change since 2020	Change since 2016
1	Japan	100	0	+23
=2	Canada	96	0	+26
=2	Finland	96	+7	+15
4	Australia	94	-6	+13
=5	Czech Republic	93	+8	+22
=5	United Kingdom	93	+2	+19
=7	France	91	0	+14
=7	Mexico	91	-2	+20
=7	Netherlands	91	0	+14
=7	South Korea	91	0	+17
=7	Sweden	91	-2	+17
=7	United States	91	-2	+10
13	Romania	90	0	+13
14	Hungary	89	+5	+17
15	Belgium	88	0	+11
=16	Jordan	87	0	n/a
=16	Ukraine	87	-3	+13
=18	Poland	85	-5	+6
=18	Switzerland	85	+3	+28
=20	Chile	84	0	+18
=20	Germany	84	-3	+19
=20	Norway	84	-5	+12
=23	Kazakhstan	82	-2	+14
=23	Spain	82	-2	+12
=25	Armenia	77	0	+12
=25	China	77	-2	+13
=25	India	77	-2	+9
=28	Slovenia	74	+3	+11
=28	United Arab Emirates	74	-6	n/a
=30	Indonesia	72	-4	+12
=30	Morocco	72	-4	+16
32	Argentina	70	-2	+8
33	Slovak Republic	67	0	+4
34	Brazil	65	+7	+5
35	Bangladesh	59	+8	+17
=36	Israel	58	0	+12
=36	Peru	58	+3	+5
=38	Algeria	57	0	0
=38	Pakistan	57	-2	+9
=40	Bulgaria	56	-2	+2
=40	Russia	56	-6	-6
=42	South Africa	47	-6	-6
=42	Uzbekistan	47	-2	+1
44	Egypt	25	-4	+4
45	Taiwan	22	0	-2
46	Iran	16	-2	+4
47	North Korea	0	0	0

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 47		Score / 100	Change since 2020	Change since 2016
=1	Argentina	100	0	+16
=1	Australia	100	0	0
=1	Belgium	100	+11	+11
=1	Brazil	100	+42	+47
=1	Bulgaria	100	0	+16
=1	Canada	100	0	+5
=1	China	100	+11	+26
=1	Czech Republic	100	0	0
=1	Finland	100	0	0
=1	France	100	0	0
=1	Germany	100	0	+11
=1	Hungary	100	0	+16
=1	Japan	100	0	0
=1	Netherlands	100	0	+10
=1	Norway	100	0	+16
=1	Pakistan	100	+11	+22
=1	Poland	100	+11	+16
=1	Romania	100	0	0
=1	Russia	100	0	+10
=1	Slovak Republic	100	0	+11
=1	Slovenia	100	0	+11
=1	South Korea	100	+11	+16
=1	Spain	100	0	+5
=1	Switzerland	100	0	+16
=1	Ukraine	100	+22	+27
=1	United Arab Emirates	100	0	n/a
=1	United Kingdom	100	0	0
=1	United States	100	0	+11
=29	Armenia	95	-5	+11
=29	Indonesia	95	-5	+10
=29	Kazakhstan	95	-5	+16
32	Israel	90	-10	+11
33	Sweden	89	0	+5
=34	Morocco	84	-5	+10
=34	Uzbekistan	84	-5	+10
36	Bangladesh	79	-5	+16
37	South Africa	78	0	0
38	Algeria	73	+37	+47
39	Egypt	62	-5	+10
=40	Jordan	58	0	n/a
=40	Mexico	58	0	+21
=42	Chile	53	-5	+11
=42	Peru	53	-5	+11
44	Taiwan	42	0	0
45	India	36	0	+5
46	Iran	25	+10	+20
47	North Korea	5	+5	+5

5. RISK ENVIRONMENT

Rank / 47		Score / 100	Change since 2020	Change since 2016
1	Sweden	93	-1	0
2	Finland	90	+5	+2
3	Australia	89	-1	-1
4	Germany	88	+4	+15
=5	Norway	86	-12	-9
=5	Switzerland	86	-5	-5
7	Canada	85	-1	-1
8	Netherlands	82	-2	+5
9	Japan	79	+1	+3
10	France	78	+5	+9
=11	Slovenia	76	-4	-4
=11	South Korea	76	0	+13
13	Taiwan	75	-1	-4
14	United Kingdom	74	-2	+4
15	United Arab Emirates	71	+3	n/a
16	Slovak Republic	68	-3	-1
17	Belgium	67	-4	-4
18	Romania	65	-3	+10
19	South Africa	64	+8	+14
=20	Hungary	63	-3	-8
=20	Poland	63	+2	+4
22	Czech Republic	62	-10	-6
23	Spain	61	-7	+6
24	Chile	59	-4	-5
=25	Israel	58	+1	+9
=25	United States	58	-5	-6
27	Argentina	55	0	+2
28	Bulgaria	54	-3	+3
=29	China	49	+5	+12
=29	Jordan	49	+9	n/a
31	Brazil	47	-3	-2
32	Armenia	46	+11	+18
=33	India	41	+5	+8
=33	Indonesia	41	+2	+5
35	Morocco	39	-5	-6
36	Mexico	37	+1	-2
=37	Bangladesh	33	+15	+14
=37	Peru	33	-7	-5
39	Egypt	31	-2	-8
40	Algeria	30	+9	0
41	Uzbekistan	29	-3	-1
42	North Korea	28	-3	-1
=43	Kazakhstan	23	-10	-5
=43	Ukraine	23	+5	+5
45	Pakistan	21	+8	+3
46	Russia	17	-9	-4
47	Iran	16	+4	-5

Overall and category scores and ranks for 2023 are shown. All countries are scored 0–100, where 100 = most favorable nuclear security conditions.
= denotes tie in rank.

Radiological

NATIONAL MEASURES

		Yes		No or no data available	
		2023	2020	2023	2020
Regulatory Oversight	Does the country/area maintain a radioactive source regulatory oversight body?	84%	81%	16%	19%
Security Measures	Are there regulations that require security measures to be in place to protect radioactive sources?	57%	56%	43%	44%
State Registry	Does the state maintain a registry of radioactive sources?	28%	36%	72%	64%
Inspection Authority	Does the state have authority to inspect facilities with radioactive sources?	50%	51%	50%	49%
Export Licenses	Are there licensing requirements for exporting International Atomic Energy Agency (IAEA) Category 1 sources?	52%	45%	48%	55%

GLOBAL NORMS

		Yes		No or no data available	
		2023	2020	2023	2020
IAEA Code of Conduct Status	Has the state made a political commitment and notified the IAEA of their intent to abide by the Code of Conduct on the Safety and Security of Radioactive Sources?	80%	78%	20%	22%
	Has the state notified the IAEA of their intent to abide by the Guidance on the Import and Export of Radioactive Sources?	71%	68%	29%	32%
	Has the state nominated a Point of Contact to facilitate imports and exports of radioactive source material?	81%	81%	19%	19%
	Has the state made available their responses to the IAEA Importing and Exporting States Questionnaire?	60%	60%	40%	40%
	Has the state notified the IAEA of their commitment to implement the Guidance on the Management of Disused Radioactive Sources?	28%	21%	72%	79%
International Participation	Does the state participate in the Global Initiative to Combat Nuclear Terrorism (GICNT)?	50%	49%	50%	51%
	Did the state send an official delegation to the 2022 International Conference on Safety and Security of Radioactive Sources?	53%	41%	47%	59%
International Conventions	Is the country/area a state party to the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)?	63%	61%	37%	39%
	Is the country/area a state party to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management?	50%	46%	50%	54%

Radiological *(cont'd)*

		Yes		No or no data available	
		2023	2020	2023	2020
International Conventions *(cont'd)*	Is the country/area a state party to the Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency?	67%	60%	33%	40%

COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES

		Yes		No or no data available	
		2023	2020	2023	2020
Intent	Has the state subscribed to IAEA Information Circular (INFCIRC) 910?	18%	18%	82%	82%
Implementation	Has the country/area publicly declared a regulatory requirement, policy, or commitment to implementing alternative technology to replace high-activity radioactive sources?	6%	6%	94%	94%

		No data available		Frequent power outages (80th–99th percentile)		60th–79th percentile		40th–59th percentile		20th–39th percentile		Infrequent power outages (0–19th percentile)	
		2023	2020	2023	2020	2023	2020	2023	2020	2023	2020	2023	2020
Capacity	What is the average percentage of businesses experiencing power outages each month?	18%	26%	16%	15%	16%	15%	15%	15%	16%	14%	18%	15%

		No data available		Few people with degrees (0–19th percentile)		20th–39th percentile		40th–59th percentile		60th–79th percentile		Many people with degrees (80th–99th percentile)	
		2023	2020	2023	2020	2023	2020	2023	2020	2023	2020	2023	2020
	What percentage of the population over 25 holds a tertiary degree or higher?	32%	39%	14%	13%	14%	12%	13%	13%	14%	12%	14%	13%

RISK ENVIRONMENT

		No data available		Very high		High		Moderate		Low		Very low	
		2023	2020	2023	2020	2023	2020	2023	2020	2023	2020	2023	2020
Political Stability	What is the risk of significant social unrest during the next two years?	4%	4%	14%	8%	25%	24%	38%	39%	16%	19%	3%	5%

		No data available		Not clear, established, or accepted		Two of the three criteria are absent		One of the three criteria is absent		Clear, established, and accepted		Very clear, established, and accepted	
		2023	2020	2023	2020	2023	2020	2023	2020	2023	2020	2023	2020
	How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?	4%	5%	23%	16%	16%	23%	21%	18%	20%	22%	16%	15%

Radiological *(cont'd)*

		No data available		Very high		High		Moderate		Low		No threat	
		2023	2020	2023	2020	2023	2020	2023	2020	2023	2020	2023	2020
Political Stability *(cont'd)*	Is there a risk that international disputes/ tensions will negatively affect the polity during the next two years?	4%	5%	17%	11%	27%	19%	32%	32%	17%	30%	3%	3%

		No data available		Territorial conflict; opposition has effective control over a region or regions		Sporadic and incursive conflict		Incursive conflict; government remains in control, but opposition engages in frequent armed incursions		Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence		No armed conflict exists	
		2023	2020	2023	2020	2023	2020	2023	2020	2023	2020	2023	2020
	Is this country/area presently subject to armed conflict, or is there at least a moderate risk of such conflict during the next two years?	4%	5%	9%	6%	6%	8%	11%	10%	32%	30%	38%	42%

		No data available		Very high		High		Moderate		Low		Very low	
		2023	2020	2023	2020	2023	2020	2023	2020	2023	2020	2023	2020
	Are violent demonstrations or violent civil/labor unrest likely to occur during the next two years?	4%	5%	11%	7%	24%	20%	29%	28%	26%	33%	6%	7%
Effective Governance	How effective is the country/area's political system in formulating and executing policy?	5%	54%	9%	2%	13%	11%	24%	19%	24%	13%	26%	2%
	What is the quality of the country/area's bureaucracy and its ability to carry out government policy?	4%	5%	9%	5%	9%	9%	27%	26%	34%	38%	19%	18%
Pervasiveness of Corruption	How pervasive is corruption among public officials?	4%	5%	22%	23%	32%	30%	20%	22%	12%	12%	11%	10%
Illicit Activities by Non-State Actors	How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption to business operations?	3%	3%	8%	6%	7%	6%	24%	24%	34%	39%	23%	21%
	How likely is organized crime to be a problem for government and/or business?	0%	0%	10%	10%	27%	19%	28%	31%	27%	32%	8%	8%
	How many firearms were seized during the interdiction of illicit weapons trafficking?	45%	51%	11%	10%	11%	10%	11%	10%	11%	10%	9%	10%

A security agent inspects a turbine room at Finland's Olkiluoto Nuclear Power Plant in October 2022.

About the NTI Index

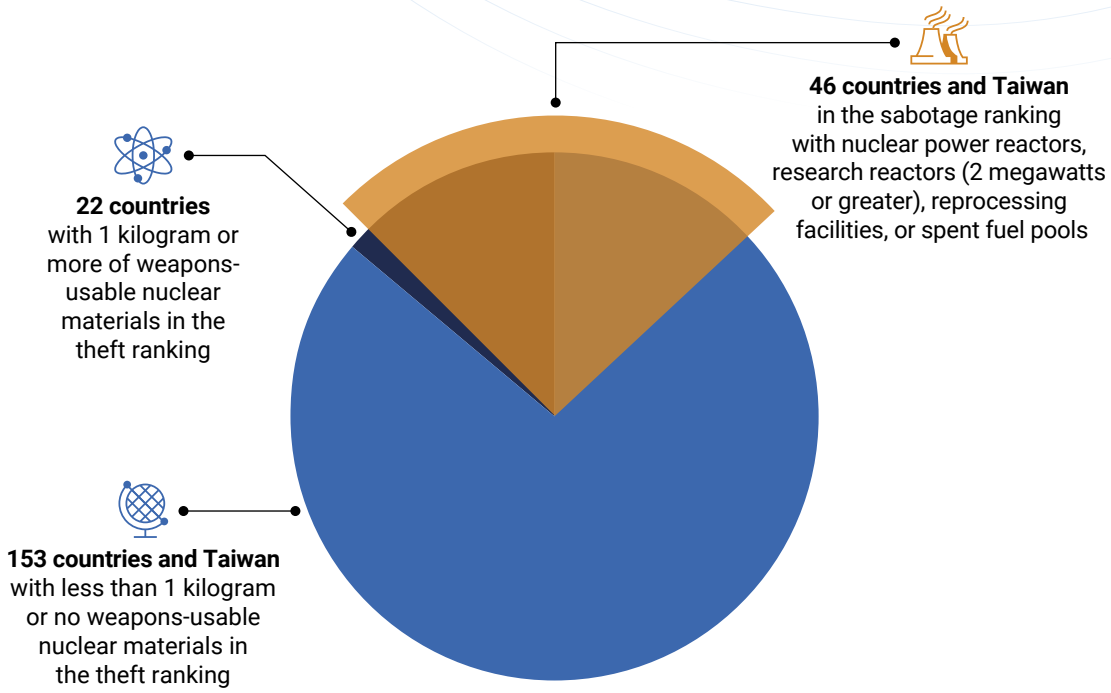
The NTI Index is a groundbreaking assessment of nuclear security conditions in countries and areas around the world. Developed in partnership with Economist Impact (EI), it uses publicly available information to track progress on nuclear and radiological security across 175 countries and Taiwan.

Taiwan is included among the countries without weapons-usable nuclear materials and countries with nuclear facilities rankings because of its autonomous regulatory structure and cooperative activities with the International Atomic Energy Agency (IAEA). In data findings, recommendations, and broad statements that include Taiwan, the NTI Index uses either "countries and Taiwan" or "countries and areas"; when Taiwan is not included, the NTI Index uses the term "countries."

The Nuclear Security Index recommends actions for governments to protect nuclear materials and facilities and to strengthen the global nuclear security architecture based on findings from the data. Published since 2012 and now in its sixth edition, the Nuclear Security Index includes two theft rankings and one sabotage ranking:

- **Theft: Secure Materials**—A ranking of 22 countries with 1 kilogram or more of weapons-usable nuclear materials—highly enriched uranium (HEU) and separated plutonium—to assess actions to secure those materials against theft.
- **Theft: Support Global Efforts**—A ranking of 153 countries and Taiwan with less than 1 kilogram of or no weapons-usable nuclear materials to assess actions to support global nuclear security efforts.
- **Sabotage: Protect Facilities**—A ranking of 46 countries and Taiwan with or without weapons-usable nuclear materials, but which have nuclear facilities, such as nuclear power reactors and research reactors, to assess actions to protect those facilities against sabotage.

Countries and Areas in the NTI Index



The 2023 NTI Index includes a Radioactive Source Security Assessment that assesses national policies, commitments, and actions to secure radioactive sources and prevent a dirty bomb in 175 countries and Taiwan. This assessment does not score or rank countries and areas.

Data visualizations, detailed scores, updates, and further analysis are available at **www.ntiindex.org**.

Why an Index

The quantity of nuclear material needed to build a nuclear bomb is relatively small—the IAEA "significant quantities" are just 8 kilograms of plutonium or 25 kilograms of HEU. These weapons-usable nuclear materials can be found in 22 countries around the world, and if stolen, the results could be disastrous. Another 153 countries and Taiwan could serve as safe havens, staging grounds, or transit routes for illicit nuclear activities, enabling the theft of these materials. Civil nuclear facilities that could be at risk of sabotage, leading to the release of radioactive materials, exist in 46 countries and Taiwan.

Terrorist groups have shown clear interest in acquiring nuclear materials and sabotaging nuclear facilities, and disruptive technologies like unmanned aerial vehicles and hybrid threat capabilities pose new challenges. Nuclear facilities today face an array of risks, from climate change–related events like wildfires and catastrophic storms to military attacks during war, such as those on the Zaporizhzhia Nuclear Power Plant in Ukraine. These risks require constant vigilance by governments, nuclear operators, and international organizations and a consistent level of political attention.

A resilient global nuclear security system is multifaceted, including international legal commitments, global norms, and domestic laws and regulations. Every country and area has a role to play in supporting this system. Significant progress has been made on nuclear security over the past two decades, particularly through the Nuclear Security Summits, but following the conclusion of that process in 2016, political attention has waned and

progress has slowed. The current era of nuclear security is defined by uncertainty, marked by a global pandemic and concerns about civil nuclear facilities in active war zones. Faltering engagement jeopardizes the strength of the global nuclear security system, and warning signs of backsliding should be addressed as an urgent priority.

Since 2012, the NTI Index has identified significant gaps and challenges in global nuclear security, offering an objective assessment of how governments have borne out their responsibility to secure nuclear materials from theft and to protect nuclear facilities from sabotage. Now in its sixth edition, the NTI Index was developed to promote country and area actions to strengthen nuclear security, track progress, identify nuclear security priorities, and build accountability. In an uncertain world, a centralized accounting of the complex global nuclear security system is more essential than ever, driving continued progress by highlighting evolutions in best practices and priorities, and illuminating emerging risks and challenges.

Development of the Index

EI conducts all research using publicly available information, such as national laws and regulations, treaty databases, and other primary and secondary sources. The NTI Index does not conduct reviews of security at nuclear facilities, but rather assesses national-level actions, such as the comprehensiveness of a country or area's regulatory framework, its commitment to global norms, and its participation in global initiatives.

Countries and areas with weapons-usable nuclear materials, nuclear facilities, or both have an opportunity to review and comment on the NTI Index data before the Index is published so that it is as accurate and current as possible. This data confirmation process increases transparency and provides a foundation for productive engagement with governments on the Index results.

The NTI Index is designed to represent international perspectives about nuclear security priorities. To help achieve this purpose, decisions about the elements of the NTI Index frameworks and how those elements are prioritized through weighting are made with input from an international panel of experts (more specifics on p. 59).

The Frameworks

A framework developed to assess a variety of factors that affect a country or area's nuclear security conditions drives each of the rankings in the Nuclear Security Index. The frameworks for the three rankings differ slightly from one another but are built from common elements:

- **Quantities and Sites:** This category captures the quantity of weapons-usable nuclear materials, the number of civil nuclear sites, and the frequency of transport of weapons-usable nuclear materials in a particular country—all factors related to the risk of weapons-usable nuclear materials being stolen. It also includes a trend indicator as to whether a country is increasing or decreasing its overall quantities of weapons-usable nuclear materials. This category is not included in the theft ranking for countries and areas without weapons-usable nuclear materials. The sabotage ranking looks at only the number of civil nuclear sites, not quantities of nuclear materials.
- **Security and Control Measures:** This category encompasses the core activities directly related to protection and accounting of nuclear materials. It includes indicators of physical protection, control and accounting, insider threat prevention, security during transport, response capabilities, cybersecurity, and security culture. This category is not included in the theft ranking for countries and areas without weapons-usable nuclear materials.
- **Global Norms:** This category includes actions that contribute to the strengthening of global norms for nuclear materials security. It captures important international legal commitments like treaty ratification, voluntary participation in a number of global initiatives, international assurances, and IAEA nuclear security information circulars (INFCIRCs).
- **Domestic Commitments and Capacity:** This category includes actions that indicate how well a country or area has implemented its international commitments and its capacity to do so. This category includes the

extent of United Nations Security Council Resolution 1540 implementation, the status of legislation to implement the amended Convention on the Physical Protection of Nuclear Material, and the presence of an independent regulatory body.

- **Risk Environment:** This category includes contextual factors, such as political stability, effective governance, corruption, and illicit activities by non-state actors that can affect a country or area's ability to implement effective security and regulatory oversight.

Countries and areas are scored on a scale of 0 to 100, where 100 is the highest possible score. Weights are applied to categories and indicators to reflect relative priorities. Overall scores are calculated on the basis of the weighted sum of category scores. Category scores are the weighted sum of the indicator scores within that category. Indicator scores are the sum of the subindicator scores normalized on a scale of 0 to 100. (See pp. 66–82 for a detailed breakdown of each framework.)

New Elements in 2023

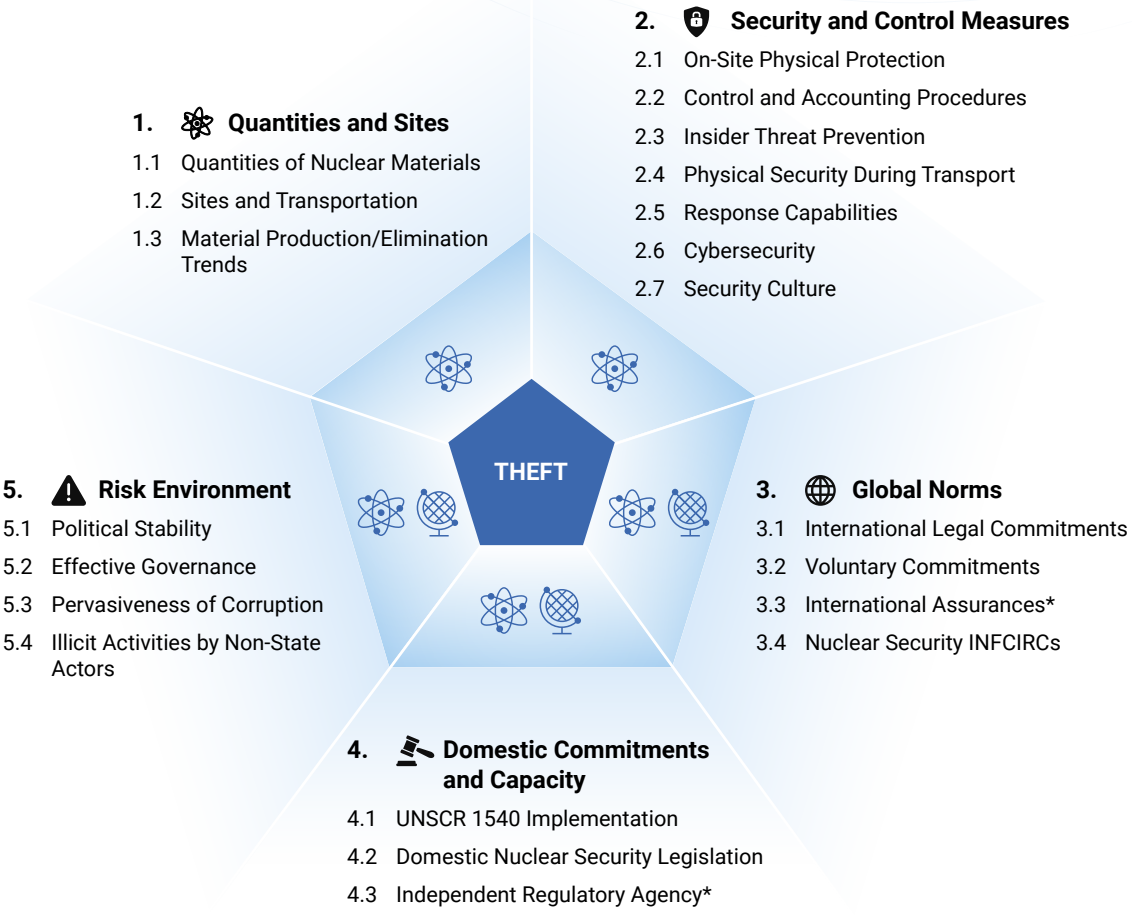
Each edition of the NTI Index is updated to account for progress on nuclear security, to address emerging challenges and risks, and to continually raise the bar for country- and area-level action. The 2020 NTI Index included significant changes to each ranking, developed immediately before the COVID-19 pandemic. Reflecting the challenges governments faced during the pandemic, with opportunities for multilateral engagement dramatically reduced, a narrower set of changes were made for the 2023 NTI Index. Among the key changes across all three rankings are the following:

- In areas where most countries and areas excelled, questions were adjusted to raise the bar to promote continuous improvement.
- A new indicator was added to the rankings for countries and areas with nuclear materials, nuclear facilities, or both to highlight the importance of subscribing to IAEA's nuclear security INFCIRC/908 on mitigating insider threats.
- To address the value of information sharing as a means of confidence building, additional credit is given to countries that make annual declarations about inventories of civil nuclear materials.
- Countries that have requested IAEA's International Physical Protection Advisory Service (IPPAS) missions receive credit for early engagement in peer review of nuclear security and can receive additional credit for hosting IPPAS missions at regular intervals, as well as for publishing full reports of results.
- An updated subindicator encourages countries and areas to release reports on nuclear security progress at regular intervals, taking advantage of multilateral forums to build confidence in their efforts to improve nuclear security conditions.

Additional Resources

The NTI Index website (**www.ntiindex.org**) has various resources for users depending on their interests. This report is available for download, along with a more detailed EI methodology. All data are available for download in interactive data models, which include underlying scores and tools to better understand the data; master data files suitable for use as a dataset for quantitative analysis are also available. Each country and area assessed by the NTI Index has a detailed profile in the interactive data models and on the website to offer a deeper dive into its performance. The website includes an interactive tool that offers tailored recommendations for improving nuclear security conditions and models the impact of these changes on scores in the NTI Index.

How the Theft Rankings Measure Nuclear Security Conditions



The Theft: Secure Materials ranking assesses countries with weapons-usable nuclear materials based on these five categories. The Theft: Support Global Efforts ranking assesses countries and areas with less than 1 kilogram of or no weapons-usable nuclear materials based on three of these categories.

KEY

Theft: Secure Materials

Theft: Support Global Efforts

*This indicator does not apply to countries and areas with less than 1 kilogram of or no weapons-usable nuclear materials.

Note: For information about data sources used for scoring, see the full EI methodology at **www.ntiindex.org**.

How the Sabotage: Protect Facilities Ranking Measures Nuclear Security Conditions

The Sabotage: Protect Facilities ranking assesses countries and areas with nuclear facilities based on these five categories.

Note: For information about data sources used for scoring, see the full EI methodology at **www.ntiindex.org**.

IAEA Director General Rafael Grossi tours Olkiluoto Nuclear Power Plant during a visit to Finland in 2020.

Findings and Recommendations

OVERALL FINDING

Nuclear security is regressing in countries and areas with the greatest responsibility for preventing nuclear theft and sabotage—those with nuclear materials and facilities. This destabilizing development occurs as risks are increasing and evolving.

For the first time in the history of the NTI Index, the data clearly show that nuclear security conditions have deteriorated in countries with weapons-usable nuclear materials. This erosion of nuclear security comes at a time when risk environments are growing more dangerous because of a rise in instability, targeted political violence from non-state actors, and persistent cyber attacks.

Previous editions of the NTI Index raised warning flags by identifying a trend of waning political attention and slowing progress on nuclear security worldwide. The biennial Nuclear Security Summits, held between 2010 and 2016, drew an unprecedented level of political attention to nuclear security, driving significant progress: 14 countries and Taiwan eliminated all weapons-usable nuclear materials from their soil, significantly reducing the risk that a malicious actor could get ahold of the material needed to make a nuclear weapon. In the years following the summits, the trend of progress continued but slowed significantly.

The 2023 NTI Index shows that countries with weapons-usable nuclear materials are now losing ground. Eight countries—France, India, Iran, Israel, North Korea, Pakistan, Russia, and the United Kingdom—have increased their stocks of weapons-usable nuclear materials, in some

Findings and recommendations on pages 33–58 are relevant to the rankings indicated by the symbols shown.

- Theft: Secure Materials
- Theft: Support Global Efforts
- Sabotage: Protect Facilities
- Radiological

cases by thousands of kilograms per year, undermining minimization and elimination efforts and increasing the risk of theft.

Countries also are reneging on their commitments to confidence building and information sharing, key drivers of progress during the period of the Nuclear Security Summits. For example, countries have failed to sustain the practice of regularly hosting the International Atomic Energy Agency (IAEA) International Physical Protection Advisory Service (IPPAS) missions that offer peer review of nuclear security arrangements. This erosion in international engagement is dangerous at a time when emerging technologies are creating opportunities for non-state actor groups to expand their capabilities and societal pressures caused by climate change, economic upheavals, the COVID-19 pandemic, and war are further straining systems.

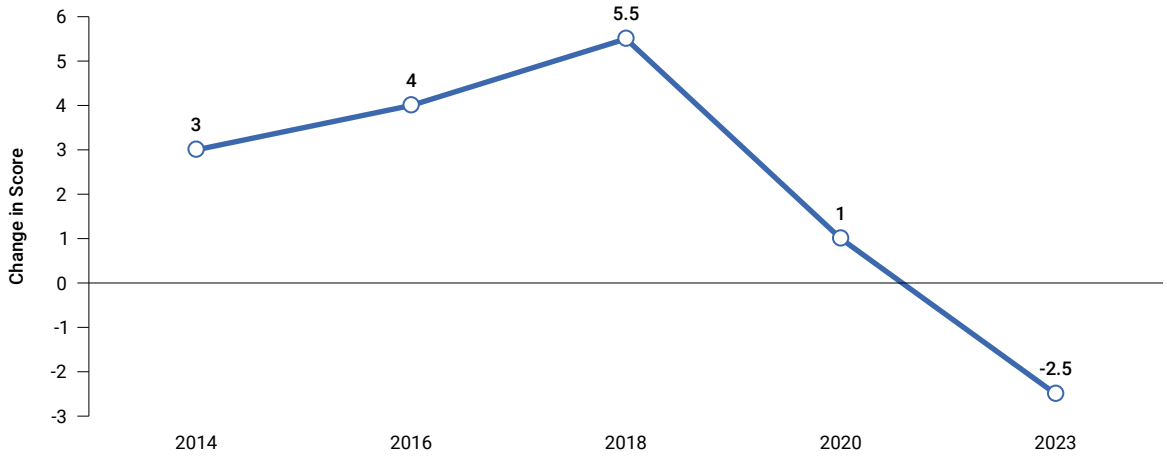
Although nuclear security is a shared global responsibility and every country and area has a role to play, countries and areas with nuclear materials and facilities carry the greatest responsibility for protecting the world from the use of a nuclear weapon by a non-state actor or a dangerous release of radiation caused by an act of sabotage. They must not only maintain a high level of security within their own borders, but also demonstrate global leadership on nuclear security.

The backsliding revealed by the 2023 NTI Index serves as a wake-up call to the world and a mandate to governments and industry to take immediate action to restore forward progress.

Data Highlights

- The median overall score of countries with weapons-usable nuclear materials declined by 2.5 points. This is the first time in the history of the NTI Index that this average has decreased. (See Figure 1.)
- France, India, Iran, Israel, North Korea, Pakistan, Russia, and the United Kingdom increased their existing stockpiles of weapons-usable nuclear materials over the past three years.
- Eleven countries with weapons-usable nuclear materials scored lower on the International Assurances indicator than they did in the 2020 NTI Index, meaning they regressed in implementation of confidence-building measures. Only Belarus and the United Kingdom improved their scores on this indicator, by hosting peer reviews of nuclear security arrangements.
- Risk environments worsened in 12 of the 22 countries with weapons-usable nuclear materials, largely due to worsening political instability and rising illicit activity by non-state actors. This is a notable change from the 2020 NTI Index, in which Risk Environment scores worsened in only five countries.

Figure 1: Change in Median Overall Score among Countries with Weapons-Usable Nuclear Materials



Finding

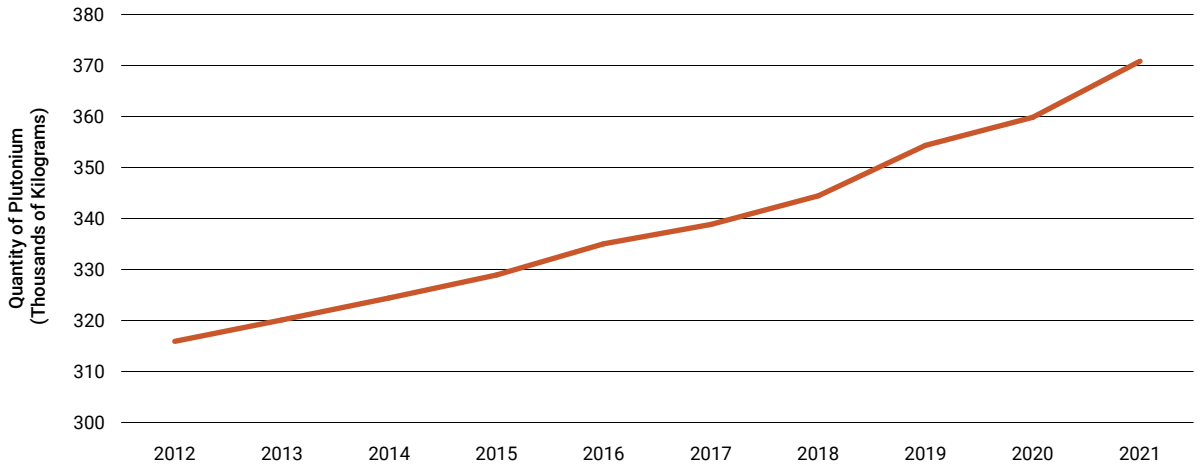
Civil stockpiles of separated plutonium are growing rapidly, with the biggest increases coming from commercial reprocessing.

The most difficult step for any actor or group seeking to develop a nuclear weapon is acquiring special nuclear materials—highly enriched uranium (HEU) or plutonium. In the case of plutonium, a mere 8 kilograms, roughly the size of a soda can, is enough to make a nuclear weapon capable of widespread destruction.[2] The more plutonium in the world, the greater the risk of its theft, diversion, or misuse. The international community has long acknowledged the risk posed by weapons-usable nuclear materials and has recognized that minimizing and eliminating stockpiles of HEU and separated plutonium is the best way to ensure that these materials are never weaponized.

Despite global efforts to limit weapons-usable nuclear materials, quantities of separated plutonium are growing rapidly, most notably at civilian facilities. It is widely recognized that plutonium with very different isotopic mixtures has similar critical masses and can be weaponized. The 2023 NTI Index finds that since 2019, global inventories of separated civil plutonium have increased by 17,000 kilograms, enough material for more than 2,100 nuclear weapons (see Figure 2). This result is a continuation of a longer trend of large increases to separated plutonium stocks, including an additional 15,000 kilograms between 2017 and 2019. The biggest contributor to this increase is the commercial sector, where private companies and state-owned enterprises in several countries are reprocessing, or recycling, spent nuclear fuel. Reprocessing separates diluted quantities of plutonium from spent nuclear fuel and fashions it into a purified form—separated plutonium—that can be used for nuclear power or a nuclear weapon.

Of the 31 countries and Taiwan with active nuclear power programs, only five—China, France, India, Japan, and Russia—choose to use a plutonium fuel cycle. The remaining 26 countries and Taiwan meet their nuclear

Figure 2: Global Inventories of Separated Civil Plutonium



[2] Following the IAEA's measure of a "significant quantity," which defines the approximate amount of nuclear material needed to make a nuclear weapon as 8 kilograms of plutonium or 25 kilograms of weapons-grade HEU.

power needs more safely with low-enriched uranium (LEU), a nuclear material that is not suitable for a nuclear weapon.

Data Highlights

- Global civilian inventories of separated plutonium total 371 metric tons, enough for at least 46,000 nuclear weapons. Inventories have increased by 17 metric tons (4.8%) since 2019 and 55 metric tons (17.4%) since 2012, when the first NTI Index was published.
- Over 90% of the world's separated civil plutonium is in six countries: France, India, Japan, Russia, the United Kingdom, and the United States.
  - Stockpiles in France, India, Japan, Russia, and the United Kingdom are the product of commercial-scale reprocessing.
  - The United States' stockpile of civil separated plutonium is mostly derived from dismantled nuclear weapons, where material was reclassified from military use to the civilian domain.
- France's separated civil plutonium inventory has increased most sharply in recent years, from 78.1 metric tons in 2013 to 90.2 metric tons in 2019 and 99.9 metric tons in 2021[3]—a 28% increase in eight years. This 21.8 metric ton increase is enough material for 2,725 nuclear weapons.
- The United Kingdom holds the largest civilian inventory of separated plutonium at 140.6 metric tons; because it shuttered its last reprocessing facility in 2022, its inventory is unlikely to increase in the near future. However, disposition pathways for the existing stockpile are likely still years away.

Recommendations

- Countries and areas should avoid using separated civil plutonium and should instead adopt LEU or other non-weapons-usable alternatives that exist for nearly all civilian plutonium applications.
- All countries and areas, including those with no plutonium, should commit to capping separated plutonium inventories at current levels.
  - For countries and areas that already use a plutonium fuel cycle, a cap is an important first step in reining in expanding stockpiles. A cap can be achieved by balancing supply with demand and disposition pathways. Japan successfully instituted a plutonium cap in 2018, but no other country has made a similar pledge.
  - For countries and areas without plutonium or reprocessing capabilities, a cap at zero would serve as a commitment to refrain from a plutonium fuel cycle in the future.
- Countries with separated plutonium should reduce their stockpiles as much and as quickly as possible.
- Countries and areas should avoid promoting nuclear energy technologies that would use a plutonium fuel cycle—including any nuclear power reactors that use fuels derived from separated plutonium.
- Governments, civil society, and industry should bolster messaging against separated civil plutonium while highlighting practical alternatives, paralleling existing efforts to disincentivize HEU.

[3] The latest available data as of the publishing of this report.

Applying Lessons from HEU Minimization to Reduce Swelling Separated Plutonium Stockpiles

China, the IAEA, Nigeria, and the United States cooperated to repatriate more than 1 kilogram of Chinese-origin HEU from a Nigerian research reactor in 2018.

In the early 2000s, the world faced a conundrum about the use of highly enriched uranium (HEU), a weapons-usable nuclear material. On one hand, growing inventories of HEU and a burgeoning HEU economy presented serious security and proliferation risks. On the other hand, HEU was fueling vital scientific research and medical treatments. To tackle this challenge, the international community invested in an effort to bring together scientists and policymakers to find alternatives to HEU for these applications.

Through advances in technology and the development of new varieties of low-enriched uranium (LEU) fuel that are not suitable for nuclear weapons, experts found ways for nearly all research and medical objectives to continue without the need for HEU. This transition led to a global movement away from HEU in all civilian settings. Since then, the majority of the research and medical facilities that used HEU have either converted their operations to LEU use or shut down, and almost all new nuclear research and medical facilities are designed to use LEU fuel. As a result, inventories of civilian HEU have been reduced by more than 7 metric tons.

Today, about 20 years on, the world faces a similar conundrum about the use of the other primary weapons-usable nuclear material: plutonium. Global inventories of separated plutonium have ballooned by more than 100 metric tons over the past two decades and present serious security and proliferation risks. At the same time, this plutonium, which is mostly used for commercial nuclear power, is helping fuel carbon-free electricity in the global effort to fight the scourge of climate change.

The international community now has an opportunity to repeat its success in reducing and reversing the use of a dangerous nuclear material while retaining the benefits it provides. A sound technical basis already exists showing that all the core goals of nuclear power—climate change mitigation, resource diversification, grid flexibility, and economic opportunity—can be achieved without plutonium fuels. In fact, of the 31 countries and Taiwan with active nuclear power programs, only 5 use a plutonium fuel cycle: China, France, India, Japan, and Russia. The remaining 25 countries and Taiwan meet their nuclear power needs with LEU. A plutonium fuel cycle is generally much more costly than using LEU alone, but countries that do use plutonium have chosen this path for various reasons. Those reasons include an attempt to reduce nuclear waste challenges, a pursuit that has largely been unsuccessful because of the very modest benefits that can be achieved.

Looking toward the next generation of nuclear power, companies around the world are offering myriad designs that could help shape a clean energy future. All those designs offer the promise of a carbon-free, reliable energy supply. Some lean on a plutonium fuel cycle, whereas others offer all the benefits of nuclear power without the need for the most dangerous materials. Nuclear energy stakeholders can and should reap all of the technology's benefits without wading into the security and proliferation pitfalls that come with plutonium fuels.

Finding

Global inventories of highly enriched uranium are continuing to gradually decline as global norms against civilian use of HEU solidify.

Since the 1990s when the international community began recognizing the proliferation and security risks posed by HEU, there has been a steady shift to alternative technologies. In civilian applications, HEU is mostly used in research reactors and other test facilities to conduct scientific studies, produce medical isotopes, and advance nuclear energy technologies. Over the past three decades, 108 out of 203 civil HEU facilities—more than half—either have shut down or have been converted to LEU fuel, demonstrating the viability of switching to safer alternatives.

Importantly, most of these hard-fought gains are standing the test of time: countries and areas around the world have accepted an informal norm against the use of HEU in civilian applications in most cases. Almost all new research reactors and medical isotope facilities are avoiding HEU. Since the last edition of the NTI Index was released in 2020, two HEU facilities have either converted or shut down, and no new HEU reactors have come online. In turn, global stockpiles of HEU continue a steady decline. The conversion and shutdown or decommissioning of HEU research facilities have led to the elimination of over 7,000 kilograms, or 280 bombs' worth, of HEU since the 1990s. Military HEU inventories are also shrinking significantly. Over the past three years, total HEU inventories have declined by approximately 3,000 kilograms.

Yet hard work remains. Despite the progress on HEU minimization, global HEU stockpiles remain above 1.3 million kilograms, enough for approximately 52,000 nuclear weapons. Just 25 kilograms of HEU, about the size of a grapefruit, are needed to make a nuclear weapon according to the IAEA's measure of a "significant quantity." Eighty-five facilities still operate with HEU, 56 of which are in Russia. Iran started producing HEU in 2021, the first new country to do so since North Korea in the early 2000s. HEU is used for naval propulsion in India, Russia, the United Kingdom, and the United States, with Australia poised to join that list under a recently announced agreement between Australia, the United Kingdom, and the United States. As these developments make clear, the important norms that have formed against HEU are not universal and still need to be formally codified in commitments, laws, or regulations.

Data Highlights

- Global HEU inventories have decreased by 3,000 kilograms since 2019 and 150,000 kilograms (10%) since 2015. More than 1.3 million kilograms remain. (See Figure 3a.)
- The number of HEU facilities across the world has declined steadily, from 131 in 2007 to 85 in 2022, with 2 HEU facilities converting or shutting down since 2020. (See Figures 3b and 3c.)

Recommendations

- Countries and areas should codify norms against civilian HEU use through clear political commitments, laws, or regulations. Doing so will cement the progress of the past several decades and protect against future backsliding.
- Countries with existing HEU facilities should accelerate efforts to develop LEU alternatives and eliminate excess HEU inventories, including those associated with facilities that were shut down years ago.
- Countries that use HEU naval propulsion need to engage in serious efforts to move toward LEU alternatives. China and France have demonstrated the technical feasibility of using LEU to fuel their submarines.

Figure 3a: Global Inventories of HEU

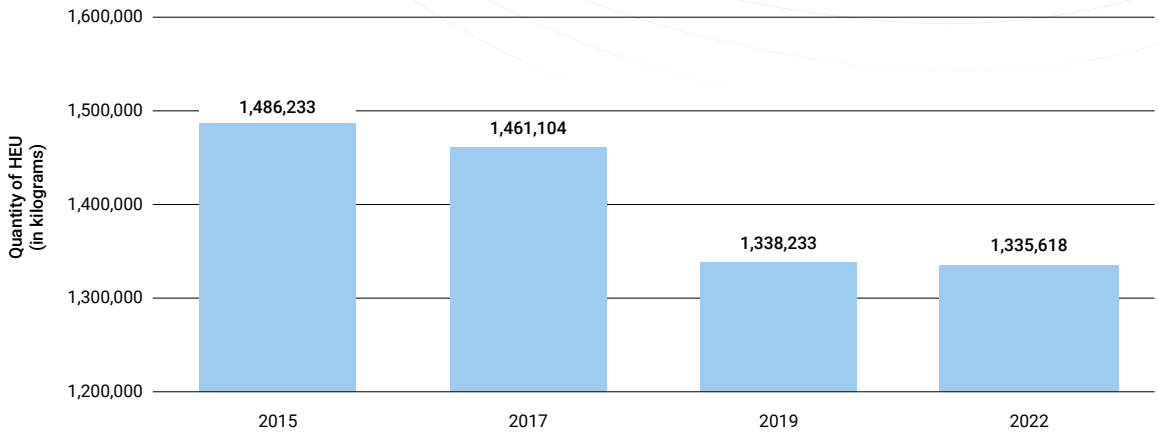


Figure 3b: New HEU Facilities Opened by Decade

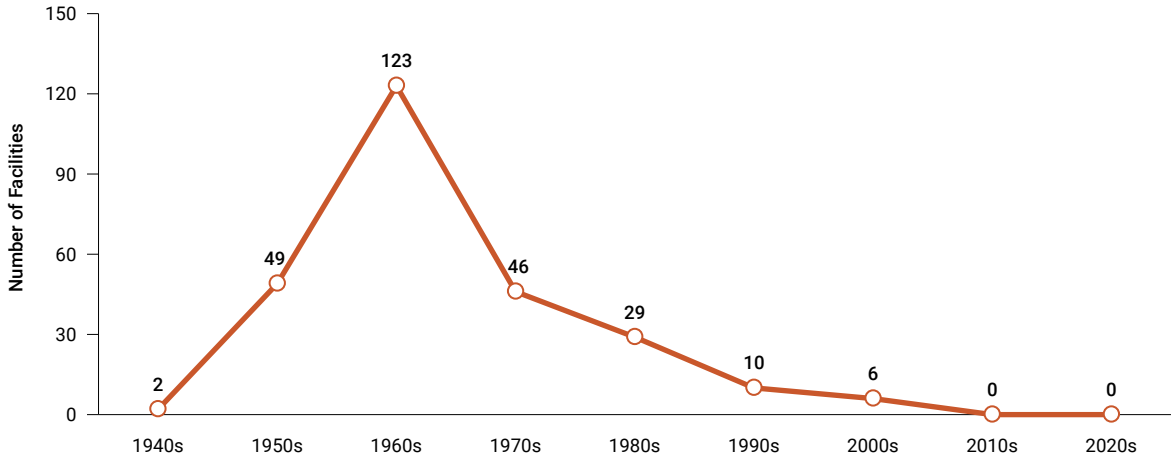
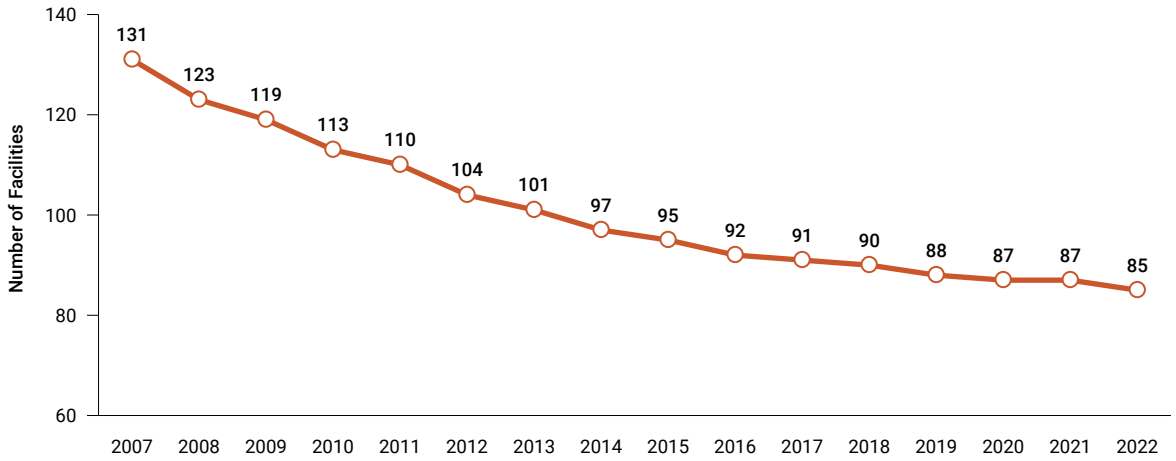


Figure 3c: Operating HEU Facilities Worldwide by Year



HEU Outlier: Enriching against the Tide

The global trend away from highly enriched uranium (HEU) use is a positive development for nuclear security; however, concerning outliers exist, primarily Iran. In 2021, Iran became the first country in almost two decades to produce HEU and by February 2023, it had amassed 87.5 kilograms of 60% enriched HEU—enough material for three nuclear weapons. Iran also is an outlier in other areas of nuclear security, ranking last or next to last in four of the five main categories that feed into the overall score in the 2023 NTI Index. Iran's score of 29 puts it in 21st place out of the 22 countries with weapons-usable nuclear materials, ahead of only North Korea.

Finding

Amid increasingly volatile risk environments, many governments are not demonstrating the capacity to meet today's nuclear security challenges.

The unprecedented risks facing all nuclear facilities—from political instability to full-scale war—are clearly reflected in the 2023 NTI Index: Risk Environment category scores decreased for 120 of the 175 countries and Taiwan that the NTI Index ranks.

A category of indicators that measure political stability, effective governance, pervasiveness of corruption, and illicit activities by non-state actors, Risk Environment is weighted less than most of the other categories in the NTI Index and is the only one not directly related to national actions on nuclear security. However, the 2023 NTI Index finds a strong correlation between Risk Environment and overall Index scores. This suggests that Risk Environment is predictive of overall nuclear security conditions and may influence how well a country or area can perform on other nuclear security indictors.

As risk environments worsen, governments must increase efforts to protect nuclear facilities. Yet the 2023 NTI Index finds that in many cases, governments are failing to react, leaving nuclear facilities with significant vulnerabilities. More than one in three countries and areas with nuclear facilities do not have regulatory requirements for protecting nuclear infrastructure during a natural or human-caused disaster. The value of such protections has never been greater given the increasing frequency of crises that do or could disrupt nuclear operations.

Data Highlights

- Of the 46 countries and Taiwan with nuclear facilities, 25 countries and Taiwan have lower Risk Environment scores than they did in the 2020 NTI Index. Nine countries had their score decrease by 5 points or more and two had their score decrease by 10 points or more. (See Figure 4a.)
- Nineteen countries with nuclear facilities had their Risk Environment score swing in the other direction; scores increased by 5 points or more in 11 countries and by 10 points or more in 2 countries.
- For the 46 countries and Taiwan with nuclear facilities, there is a strong correlation (+0.76) between Risk Environment score and overall performance in the 2023 NTI Index. (See Figure 4b.)
- Sixteen of the 46 countries and Taiwan with nuclear facilities do not require plans for protecting nuclear infrastructure during a natural or human-caused disaster. (See Figure 4c.)

Figure 4a: Change in Risk Environment Score by Ranking

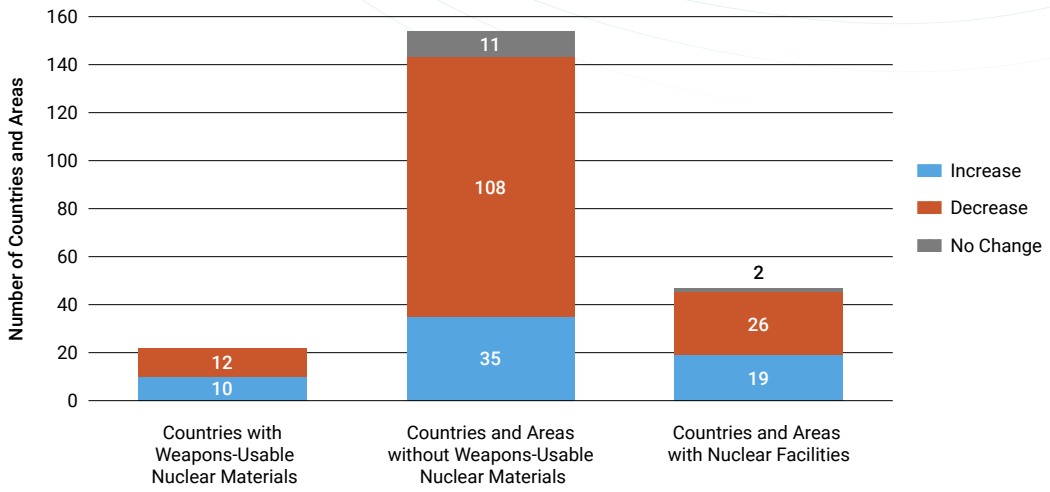


Figure 4b: Correlation Between Overall and Risk Environment Score in the Sabotage Ranking

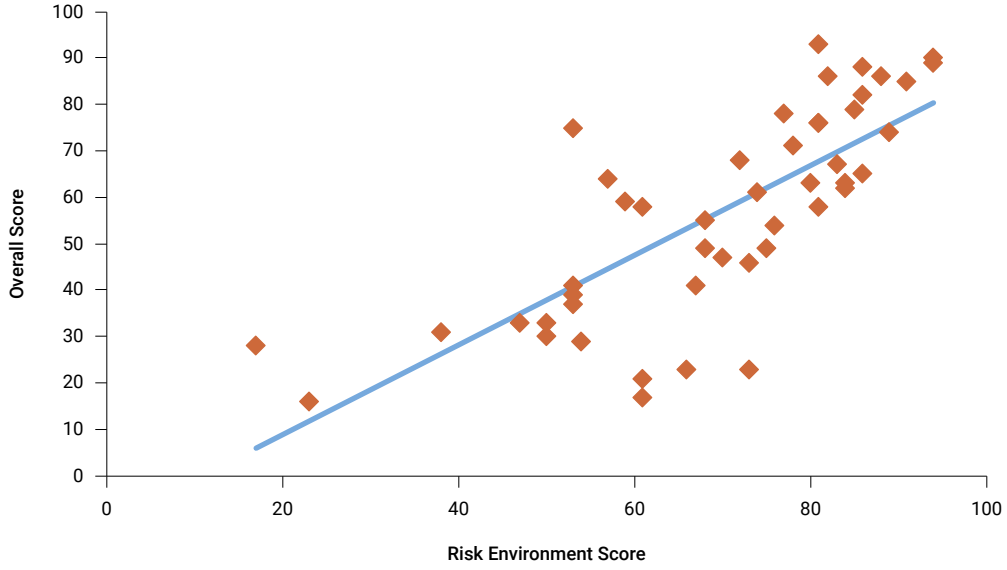
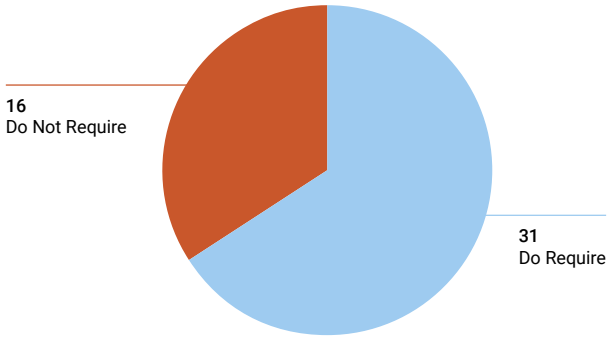


Figure 4c: Regulators That Require Plans for Protecting Nuclear Infrastructure during a Disaster



Recommendations

- Countries and areas should prioritize nuclear security when working through periods of instability or heightened risk to ensure that nuclear security shortcomings are addressed before risks become unmanageable.
- When contemplating policy decisions that could exacerbate their risk environment, governments should carefully consider the ramifications for nuclear security. This could include crafting plans to mitigate nuclear security risks when weighing national security policies.
- Countries and areas, with support from international institutions, should strengthen norms and laws prohibiting the targeting of civilian nuclear facilities. By recognizing that an attack on a civilian nuclear facility is in no one's interest, such a framework could help prevent senseless destruction.
- Governments should require nuclear operators to take steps to increase their facilities' resiliency in case of extended crises caused by natural or political shocks. By starting from a more robust baseline, nuclear facilities will be more prepared to weather unforeseen calamities.

Protecting Nuclear Facilities during War

In March 2022, the world watched in shock as Russia's army fired on and occupied Ukraine's Zaporizhzhia and Chornobyl nuclear power plants. Russian forces fired high-explosive shells around Zaporizhzhia Nuclear Power Plant, causing the plant to lose its off-site power source and forcing it to rely on short-term emergency diesel generators to cool the reactors and spent fuel. Russian forces also physically and psychologically abused staff at the Zaporizhzhia and Chornobyl sites, degrading their ability to safely operate the facilities.

In deciding to forcibly occupy Zaporizhzhia—the largest nuclear power plant in Europe—Russia has risked widespread radiological contamination and jeopardized the health of the people and the environment across the region. State-based targeting of nuclear facilities is not new; however, it has never been so reckless and brazen.

IAEA inspectors viewing war-related damage at Ukraine's Zaporizhzhia Nuclear Power Plant in September 2022.

This is a situation that few anticipated. Nuclear facilities were not designed to defend against national militaries or to operate safely in a war zone. War undermines nuclear safety and security in many ways, from undercutting security culture to introducing threats that exceed what a facility could reasonably be expected

continued on page 43

Protecting Nuclear Facilities during War (continued)

to guard against (known as design basis threat or DBT). Nuclear facilities should, however, be resilient during long-term crises. Although the NTI Index does not assess how effectively a country or area's nuclear security system will perform against specific threats, it does highlight measures that could help nuclear facilities reduce risks when crises occur. To that end, nuclear facilities should do the following:

- **Require a disaster contingency plan.** More than one-third of the 46 countries and Taiwan with nuclear facilities do not have a disaster plan. All national regulatory frameworks should require that a plan is in place to physically protect nuclear infrastructure in the event of a human-caused or natural disaster.
- **Adopt a DBT that accounts for all realistic threats a nuclear facility must protect against.** Developing a DBT includes a process by which governments evaluate threats to nuclear facilities and develop a description of adversary attributes and characteristics that nuclear facilities should defend against. For nuclear facilities to have security systems capable of preventing theft and sabotage from non-state actors, this process must be continuous, especially during crises when threats might emerge rapidly or unpredictably.
- **Conduct regular and realistic security system evaluations.** Domestic regulators and licensors should require nuclear facility operators to assess the effectiveness of their security systems and personnel by regularly conducting force-on-force exercises based on realistic threat considerations, including a variety of crises.
- **Foster an effective security culture.** An organization with a strong security culture has staff who are committed to security, strive for excellence, and look for ways to make their security systems stronger. Steps to promote a strong security culture (e.g., incentivizing high performance standards, providing threat briefings, and conducting self-assessments) can help nuclear facilities and organizations imbue the commitment to security procedures and practices at all levels of the organization. Having a strong security culture is essential during a crisis when rapidly evolving events may distract personnel from regular protocols.
- **Improve cybersecurity.** Crises, especially those that require staff to work remotely, can create opportunities for adversaries to exploit cybersecurity vulnerabilities. Regulators and licensors should require nuclear operators to protect against cyber attacks and include such attacks in their DBT. This is particularly important as facilities incorporate more digital technology into their operations and as countries and areas consider pursuing automated nuclear technologies.
- **Provide bilateral or multilateral aid to countries and areas experiencing nuclear security crises.** Countries and areas can support one another during crises that threaten nuclear facilities by providing or accepting financial and practical bilateral or multilateral assistance.

Beyond resilience building, countries and areas should work to stem the problem at its root by strengthening norms and laws against the targeting of nuclear facilities. The first step is for countries and areas to pledge not to attack civilian nuclear facilities and encourage others to do the same. This action should be supported with national statements emphasizing that an attack on a civilian nuclear facility is in no one's interest, achieves no meaningful military outcome, could threaten the future of nuclear power deployment, and has severely detrimental effects on public health.

Finding

Countries and areas with weapons-usable nuclear materials and nuclear facilities made no progress in two crucial and mutually reinforcing areas of nuclear security: security culture and insider threat prevention.

Countries and areas should be capable of defending against all realistic threats to their nuclear facilities. Among the most dangerous, vexing, and elusive threats to nuclear facilities are malicious insiders. An "insider" is anyone with access to sensitive areas of a nuclear facility who could cause harm or support others in causing harm.

Although countries and areas should require nuclear facilities to have programs in place to protect against potentially dangerous insiders, many do not. In the 2023 NTI Index, the median Insider Threat Prevention score among the 22 countries with weapons-usable nuclear materials showed no improvement over the 2020 NTI Index. Alarmingly, of the 46 countries and Taiwan with nuclear facilities, 25 have no regulations or licensing conditions that require personnel to report suspicious behavior; 31 do not require drug testing, background checks, and psychological and mental fitness checks for personnel; and 20 do not specify the frequency with which personnel should be re-vetted.

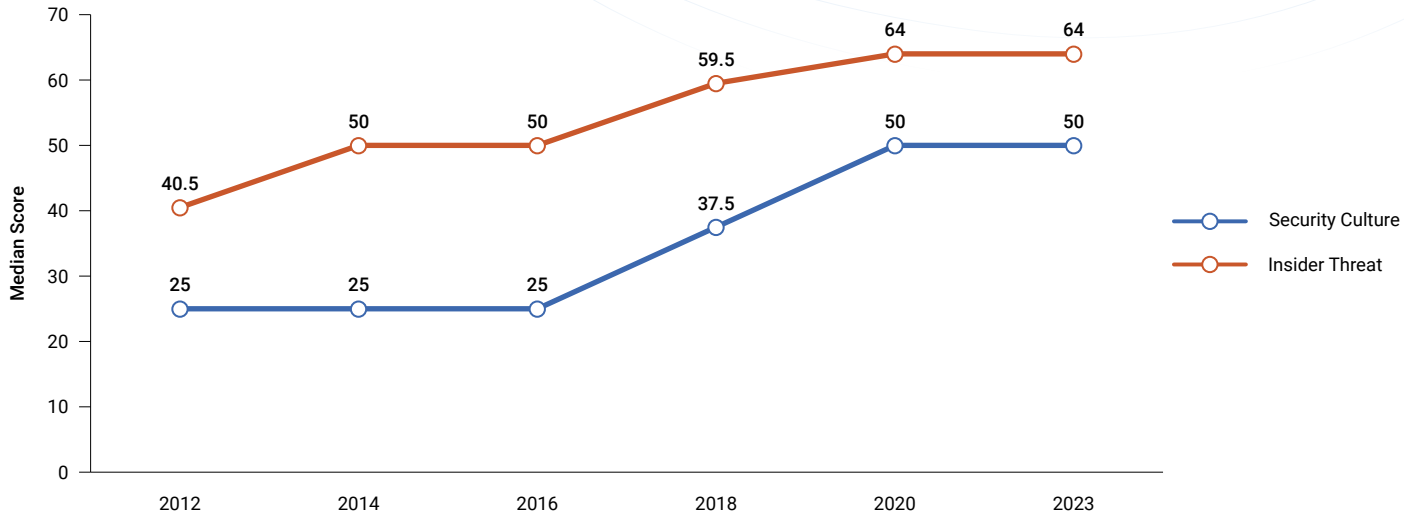
Another critical indicator where median scores did not increase is Security Culture—a foundational component of an effective nuclear security system. To sufficiently defend against threats, including from insiders, nuclear facilities should have programs in place to improve security culture. A strong security culture is one where personnel are vigilant to potential insider threats and proactive in looking for vulnerabilities and suggesting ways to address them. Strong culture is further supplemented by a diverse workforce that assesses nuclear security systems from different perspectives and provides insights for improving them. The 2023 NTI Index shows that countries and areas have yet to make progress in this area: of the 22 countries with weapons-usable nuclear materials, only 9—Australia, Belgium, Canada, China, India, Japan, Pakistan, Russia, and the United Kingdom—mention security culture in their annual reports or regulations and only 5—Australia, Belgium, Canada, Norway, and the United Kingdom—have regulations that require security culture self-assessments.

Data Highlights

- The median Insider Threat Prevention score in countries with weapons-usable nuclear materials is low and, because of deterioration in France's personnel vetting practices, stayed the same between NTI Index editions for the first time since 2014. (See Figure 5.)
- In the 46 countries and Taiwan with nuclear facilities, the median Insider Threat Prevention score hit a record low of 34, a reflection of the weakening of personnel vetting practices in France and Ukraine.
- Chile, Finland, Japan, Norway, and Romania increased their Insider Threat Prevention scores, but these changes were not significant enough to improve the median overall score.
- The median Security Culture score for countries with weapons-usable nuclear materials did not improve from the 2020 NTI Index.[4] (See Figure 5.)

[4] Belgium was the only country to improve its Security Culture score. By referencing security culture in its annual report or its regulations and by requiring security culture assessments at nuclear facilities, Belgium's score increased by 50 points, giving it one of the top Security Culture scores of countries and areas with weapons-usable nuclear materials.

Figure 5: Median Scores for Insider Threat Protection and Security Culture in Countries with Weapons-Usable Nuclear Materials



Recommendations

- Countries and areas with weapons-usable nuclear materials and nuclear facilities should intensify their efforts to establish and strengthen programs aimed at identifying and mitigating insider threats. Nuclear facilities should be able to defend against a sophisticated insider with deep knowledge of the facility and insiders collaborating with outsiders.
- Nuclear operators should have programs to strengthen security culture within their organizations that emphasize the importance of including diverse voices in nuclear security system development, implementation, and vulnerability assessments.
- Regulators, intelligence organizations, law enforcement, industry, and non-governmental organizations should share appropriate information related to threats, peer review, and lessons learned from nuclear security incidents. This information should include case studies in which nuclear facility operators successfully defended against threats and where a facility failed to address a security challenge.
- Civil society organizations, especially those participating in international gatherings, should demand and support stronger nuclear security around the world. In particular, non-governmental organizations should offer innovative ideas, encourage governments to act, track nuclear security progress, and educate the public.

Finding

Among the 46 countries and Taiwan with nuclear facilities, support for new political and legal commitments and international assurances is faltering.

Global nuclear security norms rest on an architecture of national legal and voluntary political commitments, including international assurances. Assurances are of particular importance, given the sensitivities around sharing nuclear security information and the potential global risk created by weak security. The 2023 NTI Index shows that support for these building blocks has stagnated in the 46 countries and Taiwan with nuclear facilities—threatening the integrity of the system built to help countries and areas do their part to prevent nuclear terrorism and the norms that system upholds.

Since the 2020 NTI Index, the international nuclear security architecture has suffered the consequences of the COVID-19 pandemic and escalating geopolitical tensions. During the pandemic, international meetings—one of the primary mechanisms for providing assurances and announcing new commitments—were postponed and peer review processes were interrupted. At the same time, the rise in geopolitical tensions has thwarted cooperation between countries with large stocks of weapons-usable nuclear materials.

The 2023 NTI Index reveals the impact of these disruptions on international assurances. The International Assurances indicator evaluates whether countries and areas are publicly releasing nuclear security regulations and regular nuclear security progress reports, sharing best practices, and hosting IPPAS missions. The 2023 NTI Index finds that a staggering 14 out of 46 countries and Taiwan with nuclear facilities received a lower score on the International Assurances indicator than they had in the 2020 NTI Index.

The NTI Index also shows how these disruptions affected two particularly important national legal commitments: the amended Convention on the Physical Protection of Nuclear Material (CPPNM), which legally obligates countries to physically protect nuclear facilities, and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), which criminalizes nuclear terrorism.[5] Only one country with nuclear facilities, Brazil, joined the amended CPPNM. Four countries with nuclear facilities—Egypt, Iran, North Korea, and South Africa—have still not joined the amended CPPNM.

The 2023 Index finds that the 46 countries and Taiwan with nuclear facilities are, on average, backsliding on their voluntary political commitments to global nuclear security initiatives. These commitments can take different forms, but they include membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (Global Partnership), monetary contributions to organizations like the World Institute for Nuclear Security and the IAEA's Nuclear Security Fund, and high-level participation in major international conferences. Since the 2020 NTI Index, three times as many countries' Voluntary Commitments scores declined (six) as improved (two).

Another notable set of voluntary commitments are codified in IAEA information circulars (INFCIRCs). The nuclear security–focused INFCIRCs began as multilateral pledges made during the Nuclear Security Summit process but have since been enshrined as INFCIRCs for all IAEA member states to join. One of the most successful has been on mitigating insider threats, now formalized as INFCIRC/908. This initiative outlines steps that countries and areas can take to address insider threats, such as supporting the development and implementation of an IAEA training course on insider threat mitigation. It also inspired the development of the Mitigating Insider Threats International Working Group. Co-chaired by Belgium and the United States, it is the only multilateral forum dedicated to dialogue and sharing best practices on insider threat mitigation. Only two countries have joined INFCIRCs since the 2020 NTI Index.

[5] In 2022, Ukraine informed the United Nations that it was unable to execute its obligations under ICSANT as a result of the Russian invasion.

Data Highlights

- Global Norms scores—which measure legal commitments, participation in international groups, and support for international organizations—decreased in 23 countries with nuclear facilities and increased in 9. This is the first time that the median Global Norms score among the 46 countries and areas with nuclear facilities did not increase. (See Figures 6a and 6b.)
- Brazil is the only country with nuclear facilities to join the amended CPPNM since 2020. Four countries with nuclear facilities—Egypt, Iran, North Korea, and South Africa—have not yet ratified the amendment.
- Slovenia and Switzerland are the only countries with nuclear facilities that made new political commitments to international nuclear security best practices since 2020. Both countries joined INFCIRC/908 on mitigating insider threats.
- International Assurances scores decreased for 21 countries with nuclear facilities and increased in only 7. This is the first time the NTI Index has measured a decrease in the average International Assurances score, which remains very low, for the 46 countries and Taiwan with nuclear facilities. (See Figure 6c.)

Figure 6a: Change in Global Norms Scores among Countries and Areas with Nuclear Facilities

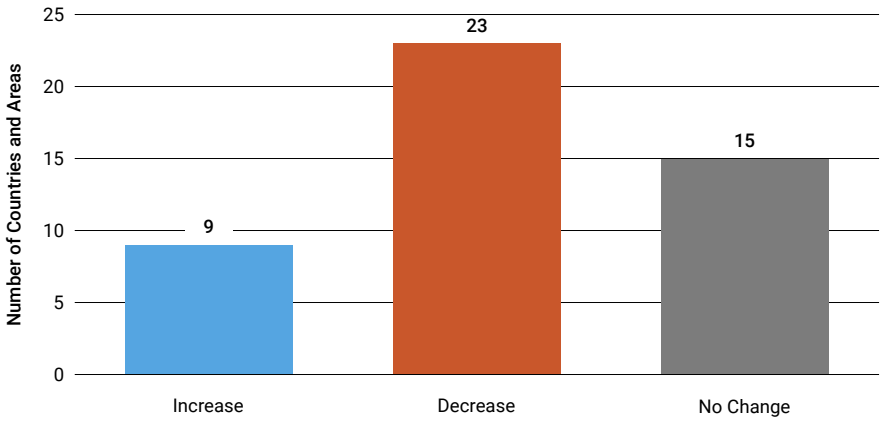
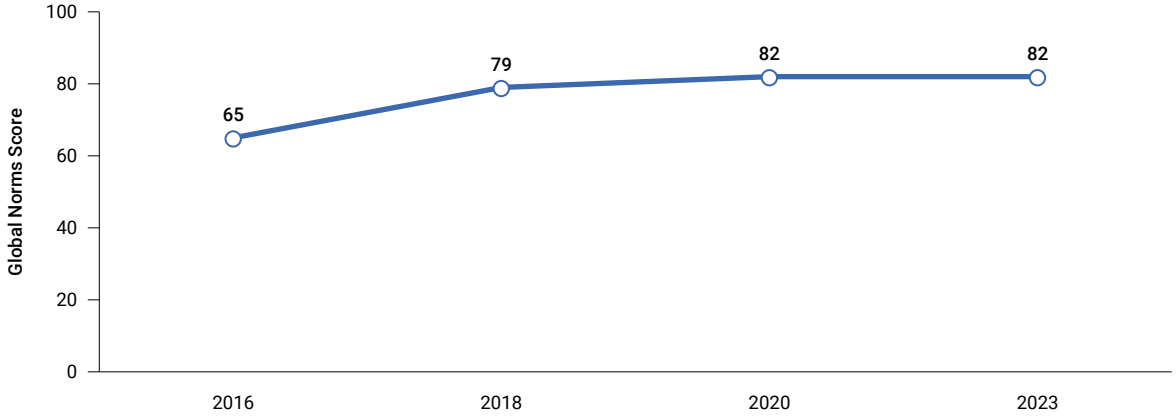


Figure 6b: Median Global Norms Score among Countries and Areas with Nuclear Facilities



- As a result of the COVID-19 pandemic, no countries or areas participated in IAEA IPPAS peer reviews in 2020. Finland is the only country that participated in an IPPAS mission in 2022. Five missions are planned for 2023 (Bangladesh, Kuwait, the Netherlands, Romania, and Switzerland), a pace much closer to the historical high point of six annual missions. (See Figure 6d.)

Recommendations

- Governments should organize new global or regional head-of-state-level summits focused on reducing the risk of nuclear sabotage or theft. Such events are important motivators for increased international cooperation and tangible national action to strengthen nuclear security.
- Countries and areas, especially those with weapons-usable nuclear materials, should make voluntary political commitments to strengthen their nuclear security implementation; these should include subscribing to multilateral initiatives.
- Countries should revitalize the Global Initiative to Combat Nuclear Terrorism, a group of 89 countries, co-chaired by Russia and the United States, that promoted nuclear security by providing workshops, exercises, and information exchanges primarily on nuclear detection, nuclear forensics, and emergency response.
- Countries and areas, with the support of civil society, should encourage each other to participate in nuclear security peer reviews, such as IPPAS missions.

Figure 6c: Average International Assurances Score among Countries and Areas with Nuclear Facilities

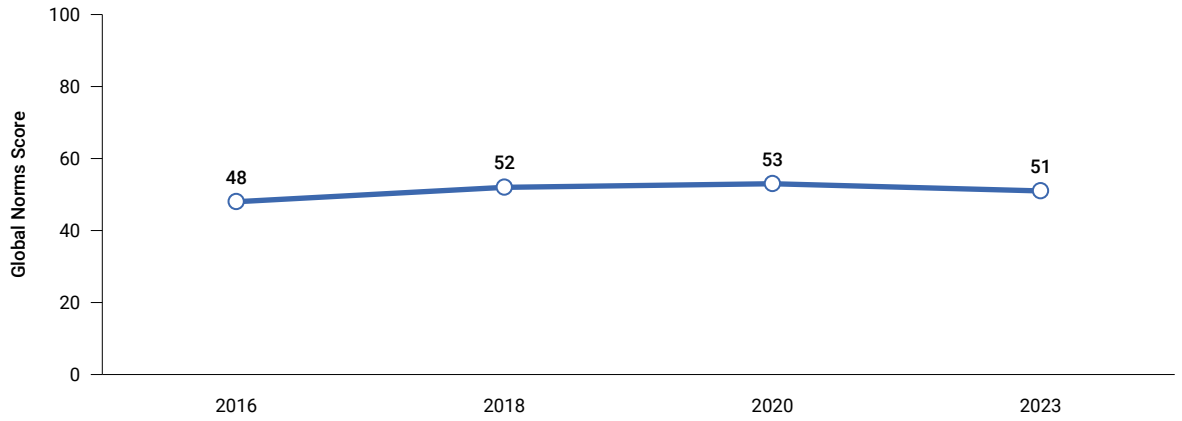
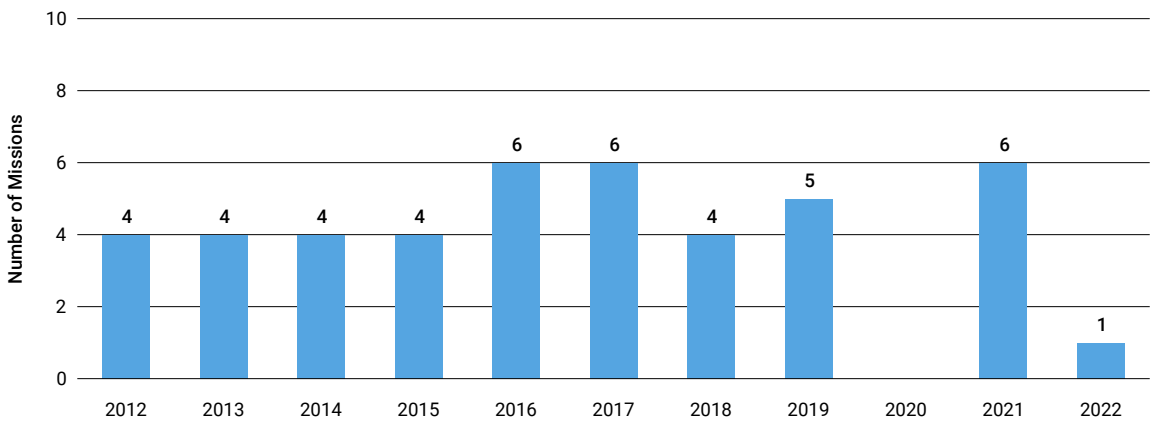


Figure 6d: Number of IPPAS Missions Conducted by Year



Multilateral Drivers of Progress

Every country and area is responsible for effectively and sustainably securing its nuclear materials and facilities, but because contemporary threats extend across national borders, countries and areas will be more successful at reducing nuclear security risks if they cooperate with one another and international institutions.

In particular, international meetings with high-level political participation provide important opportunities for government leaders to announce new commitments and recent accomplishments, highlight additional technical or financial resources to strengthening nuclear security, and share substantive information about how they are implementing nuclear security.

IAEA Director General Rafael Grossi delivers opening remarks at the Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material at the IAEA Vienna headquarters in March 2022.

Two multilateral milestone meetings have been held since the 2020 NTI Index: in February 2020, the International Atomic Energy Agency (IAEA) held its third International Conference on Nuclear Security (ICONS) that included a ministerial-level segment, which resulted in a consensus document summarizing some key nuclear security challenges. In March 2022, the IAEA convened the first-ever Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material (CPPNM), which legally obligates parties to physically protect nuclear facilities. However, few countries seized these opportunities to make new announcements about their efforts to strengthen nuclear security or cooperative initiatives.

There also was a significant blow to the ecosystem of multilateral nuclear security institutions in 2022, when the Global Initiative to Combat Nuclear Terrorism was suspended because of Russia's invasion of Ukraine.

The next high-level multilateral meeting on nuclear security issues is ICONS in May 2024; it will be an important moment for countries to demonstrate their leadership on nuclear security issues. To capitalize fully on the opportunity ICONS provides, countries should do the following:

- Prepare detailed and substantive statements about their nuclear security progress and highlight new commitments they have made to improving nuclear security, including specific initiatives to eliminate, minimize, or secure nuclear materials.
- Support universalization and full implementation of the amended CPPNM by ratifying the treaty and meeting its obligations.
- Highlight in national statements the importance of diversity, equity, and inclusion as an essential element of security culture. A nuclear security system is stronger when all the individuals involved, especially if they have different perspectives, can contribute their insights and ideas on how to improve it.

Finding

The number of countries and areas fulfilling their outstanding obligation to effectively protect nuclear materials and facilities has nearly doubled.

Commitments are important, but not enough. The global nuclear security architecture is underpinned by countries and areas fully implementing their political and legal commitments. In a positive development, the 2023 NTI Index finds that countries that have made legal commitments to effectively protect nuclear materials and facilities are taking important steps toward fulfilling them. These legal commitments come through the amended CPPNM, which requires parties to submit laws and regulations to the IAEA that prove the existence of a national legislative and regulatory nuclear security framework and a competent authority to implement that framework.

Sharing laws and regulations is not only a demonstration of a government's commitment to an international treaty or resolution, but a confidence-building measure that illustrates how it meets this obligation. Perhaps most meaningfully, the process governments undergo to prepare this information for submission spurs essential conversations among government officials about the country's nuclear security status. These conversations can lead to better coordination to improve laws, regulations, and implementation.

United Nations Security Council Resolution 1540 (UNSCR 1540) is another important mechanism for nuclear security confidence building that obligates all states to provide "appropriate effective" security and accounting for all nuclear weapons and related materials.[6] Countries and areas are encouraged to share details about their nuclear security regulations through the United Nations' 1540 Matrix, but for the first time, the 2023 NTI Index found a decrease in the implementation of this mechanism.

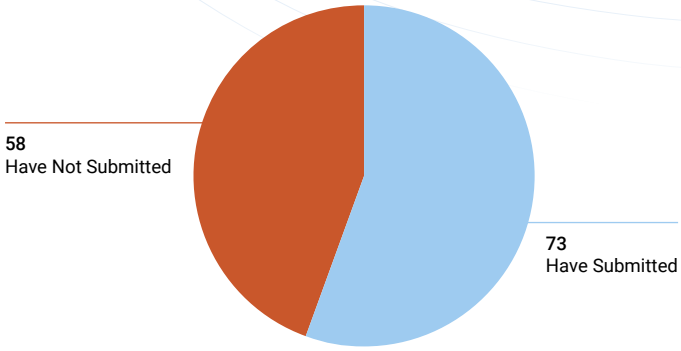
Data Highlights

- Fifty-eight of the 131 states-parties to the amended CPPNM (44%) have not yet demonstrated that they are implementing the treaty by submitting their laws and regulations to the IAEA. (See Figure 7a.)
- The number of states-parties to the amended CPPNM that have submitted their nuclear security laws and regulations to the IAEA has nearly doubled since the end of 2019; six of the countries that have joined since then have nuclear facilities. There are now 73 fulfilling this legal obligation, including 6 with nuclear facilities.[7] (See Figures 7a and 7b.)
- Two countries, Algeria and Brazil, established independent regulators since the 2020 NTI Index. Eight of the 46 countries and Taiwan with nuclear facilities, including 3 with weapons-usable nuclear materials, still do not have independent regulators for their civilian nuclear facilities. (See Figure 7c.)
- Scores for the UNSCR 1540 Implementation indicator decreased in 11 countries. Although the average score remains high for the 46 countries and Taiwan with nuclear facilities, this is the first time that this average has declined.

[6] The NTI Index assesses implementation of UNSCR 1540, but also relates directly to the Security and Control measures described within this Index, which encourage high standards for physical protection, control, and accounting; insider threat prevention; response capabilities; cybersecurity; and security culture.

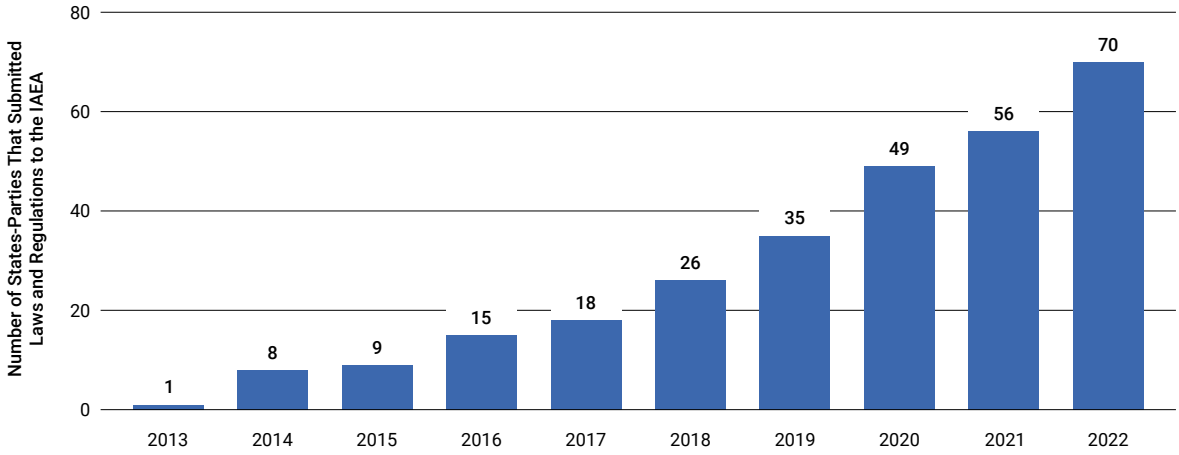
[7] Belgium, China, Pakistan, Poland, South Korea, and Ukraine.

Figure 7a: Submission of Article 14.1 Reports by Parties to the Amended CPPNM*



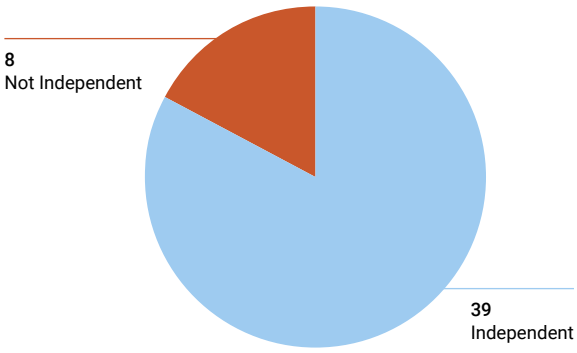
* Although Albania, Ireland, Singapore, and Slovakia fulfilled their national legal framework obligations, they did not provide dates for their submission and are not included in this figure.

Figure 7b: States-Parties to the Amended CPPNM That Fulfilled National Legal Framework Obligations, Cumulative, 2013–2022*



* Although Albania, Ireland, Singapore, and Slovakia fulfilled their national legal framework obligations, they did not provide dates for their submission and are not included in this figure.

Figure 7c: Presence of an Independent Regulatory Agency among Countries and Areas with Nuclear Facilities



Recommendations

- States-parties to the amended CPPNM, especially those with weapons-usable nuclear materials, should achieve full compliance with the treaty. This should include the submission of laws and regulations related to nuclear security to the IAEA.
- To deliver on their obligations under the amended CPPNM, states-parties should strive to better identify security weaknesses and ensure compliance with stringent regulations.
- Countries and areas with nuclear facilities and materials should establish independent regulators that will provide unbiased oversight of nuclear security implementation.
- Countries and areas should adhere to and actively support UNSCR 1540 by providing appropriate and effective security for all nuclear facilities and materials and by submitting the requisite information to the UNSCR 1540 Matrix.

Finding

Countries in the Global South have made the biggest improvements to their nuclear security conditions, though there is still significant work to be done.

In contrast to the regression in nuclear security conditions among countries with weapons-usable nuclear materials, many countries without these materials—particularly in the Global South[8] and the Group of 77 (an intergovernmental organization of developing countries)—have actively supported nuclear security. This finding runs contrary to the pervasive notion that Global South countries are skeptical of the importance of nuclear security and are not implementing measures to improve security.

A truly inclusive global nuclear security system recognizes that every country and area has an important role to play in advancing a safer world for all. Countries and areas without weapons-usable nuclear materials can drive progress on universalizing international nuclear security treaties and strengthening global norms. The 2023 NTI Index indicates that Global South countries are leading by example on this front: 10 countries have ratified the amended CPPNM, 39 improved their implementation of UNSCR 1540, and 27 offered or received bilateral or multilateral support related to nuclear security.

These are important steps forward, but the 2023 NTI Index also shows that overall scores remain significantly lower among countries in the Global South than countries and areas in the Global North. (See Figure 8a.) Global South countries have built impressive momentum that they must carry forward to address the many nuclear security issues that still lie ahead.

Data Highlights

- Since 2020, countries without weapons-usable nuclear materials in the Global South improved their median overall score by 3.5 points. This is the second-largest score increase among countries and areas without weapons-usable nuclear materials that the NTI Index has ever shown, and the largest since the conclusion of the Nuclear Security Summit process in 2018. (See Figure 8b.)

[8] "Global South" countries refers to the 132 United Nations (UN) member states that participate in cooperation for development through the UN Office for South-South Cooperation. Membership in this group overlaps closely with the UN Group of 77 (G77), excepting only Azerbaijan and Eswatini. Taiwan is not a member of the United Nations and is excluded from both groups.

Figure 8a: Median Overall Score: Countries and Areas without Weapons-Usable Nuclear Materials

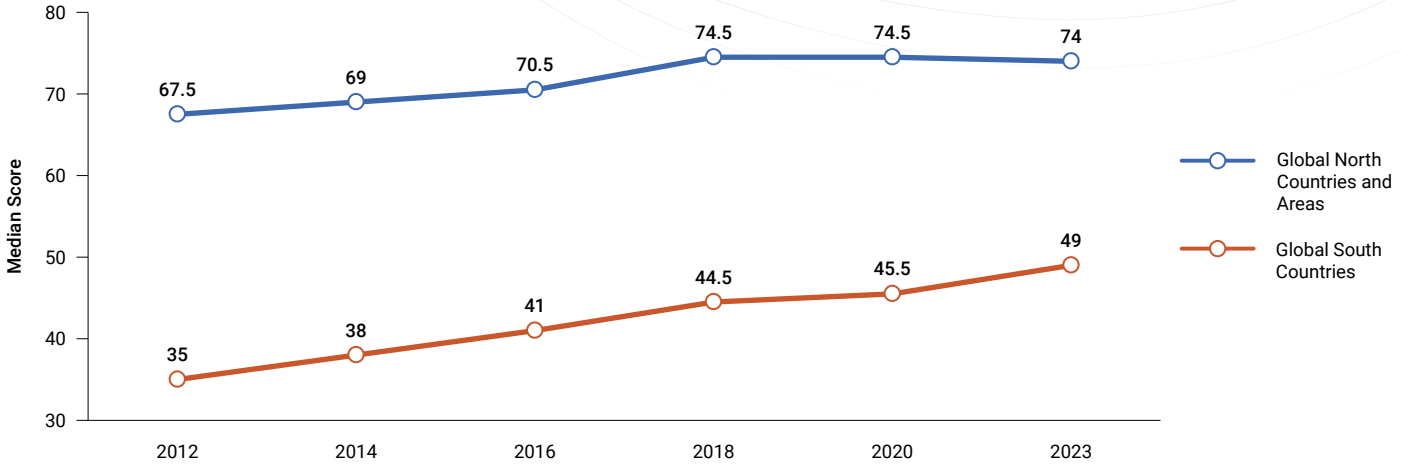
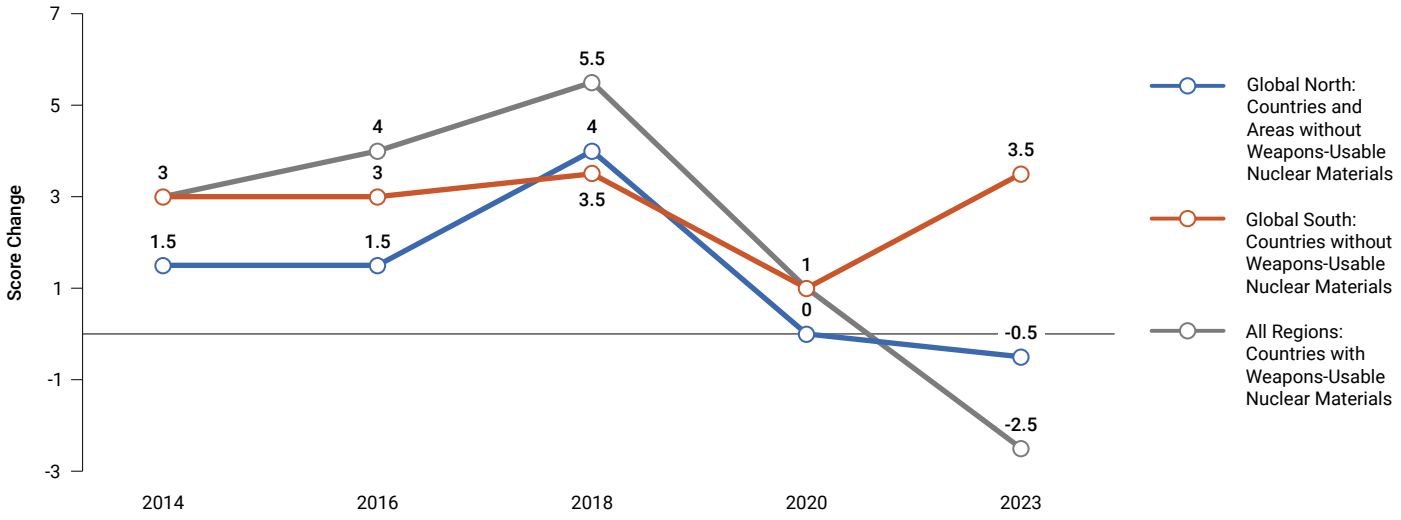
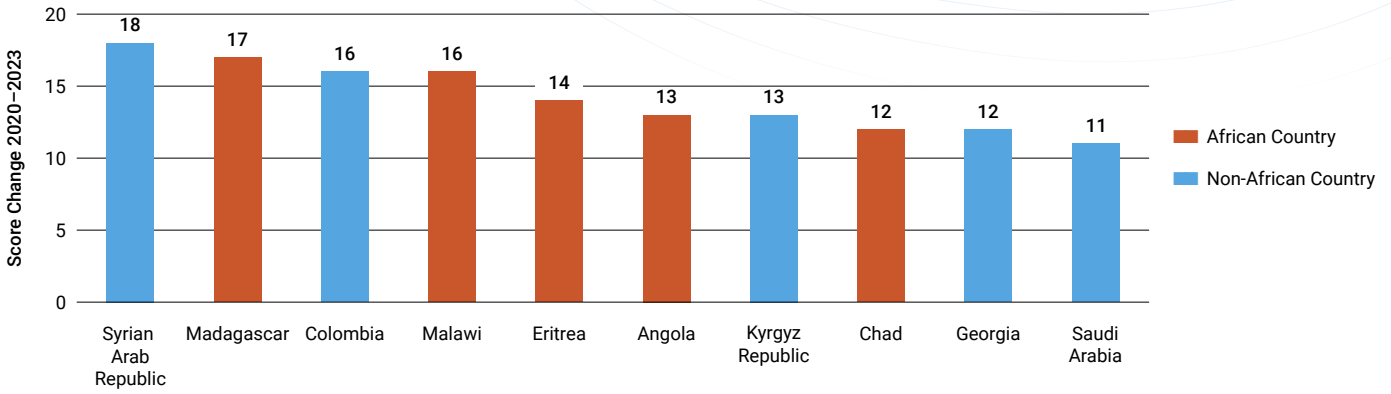


Figure 8b: Change in Median Overall Score



- The increase in the median overall score of Global South countries can be traced to notable movement on three indicators: 10 Global South countries ratified the amended CPPNM, increasing International Legal Commitments scores, and 39 made significant improvements to their implementation of UNSCR 1540, increasing UNSCR 1540 Implementation scores. Another 27 Global South countries improved their scores under the Voluntary Commitments indicator by providing or receiving bilateral or multilateral assistance related to nuclear security.
- African countries are leading the way; of the 10 countries without weapons-usable nuclear materials that most improved their overall score, 5 are located on the continent: Angola, Chad, Eritrea, Madagascar, and Malawi. All 5 improved their overall score by at least 10 points. (See Figure 8c.)
- Global South countries without weapons-usable nuclear materials have significantly lower overall scores than Global North countries with weapons-usable materials. Among countries and areas without

Figure 8c: Most Improved Countries without Weapons-Usable Nuclear Materials, 2020–2023



weapons-usable nuclear materials, those in the Global South have a median overall score of 49 out of a possible 100, whereas those in the Global North have a median score of 74—25 points higher. (See Figure 8a.)

Recommendations

- Countries in the Global South should ratify the amended CPPNM if they have not done so already and subscribe to IAEA nuclear security INFCIRCs. Progress in these areas would promote the universalization of important legal instruments and best practices.
- Nuclear security practitioners should advance an inclusive narrative about the universal benefits of strong and sustainable nuclear security. The mainstream dialogue about nuclear security should reflect the fact that every country and area has a role to play in creating and maintaining a durable and resilient global nuclear security system. Building from this, all governments should demand continuous improvement in nuclear security practices nationally, regionally, and internationally.

Finding

Despite volatile risk environments and growing interest in nuclear energy, support for the IAEA's role in nuclear security is inconsistent.

The IAEA plays a central coordinating and capacity-building role in global nuclear security. It is a normative body, treaty depositary, generator of resources and information, multilateral convener, and promulgator of best practices. Nearly 10 years after the IAEA established its Division of Nuclear Security, the 2023 NTI Index finds that support for the IAEA's role in nuclear security remains inconsistent, even as demands for the IAEA's attention and resources grow and global risks evolve.

Many governments incorrectly believe that supporting the IAEA's role in nuclear security undermines the agency's ability to play its historical and well-accepted role advancing nuclear safety, facilitating technical cooperation,

and promoting the peaceful uses of nuclear energy. In fact, as an independent international body, the IAEA has a legitimate and essential role to play in both nuclear security and safety. The IAEA's nuclear security guidance and best practices are of equal importance to the nuclear safety standards it sets, and its peer review services, training, technical advice, and advisory services are critical tools for improving nuclear security in member states.

The IAEA also offers important opportunities for engagement in nuclear security dialogue through the series of meetings of the International Conference on Nuclear Security (ICONS) and regular meetings of the Nuclear Security Guidance Committee. By engaging in these forums, governments can indicate political support for the legitimacy of the IAEA's role in nuclear security and gain an important breadth of perspective on how to drive nuclear security priorities forward; too few make the most of these opportunities.

The value of the IAEA's on-the-ground capacity has been on full display since Russian forces began their assault and occupation of Ukrainian nuclear power plants. In September 2022, the IAEA launched an unprecedented permanent support and assistance mission to the Zaporizhzhia Nuclear Power Plant to ensure the safety and security of Europe's largest nuclear facility. The IAEA has extended these permanent missions to other nuclear power facilities in Ukraine as well. Demands for access to nuclear security services without stable and adequate support threaten to strain the IAEA's ability to execute in this mission area.

Countries with emerging nuclear energy programs will drive demand for the IAEA's nuclear security service offerings, as they seek to ensure that their nuclear facilities are adequately protected, and nuclear security measures are appropriately implemented. As of April 2023, almost 60 nuclear power reactors are under construction around the world and roughly 30 countries are considering, planning, or starting new nuclear power programs. These countries will need robust nuclear security measures designed to align with IAEA guidance in place as nuclear facilities come online. The IAEA is the only international body capable of supporting this urgent need, providing a critical confidence-building measure to manage risks and enable the peaceful uses of nuclear energy.

If countries and areas do not begin contributing to the IAEA's Nuclear Security Fund with more regularity, the IAEA will be left without stable funding as its mission grows in scope and consequence.

Data Highlights

- Eight of the 22 countries with weapons-usable nuclear materials and 20 of the 46 countries and Taiwan with nuclear facilities did not send ministerial-level delegations to ICONS 2020. (See Figure 9a.)

Figure 9a: Ministerial Delegations at ICONS 2020

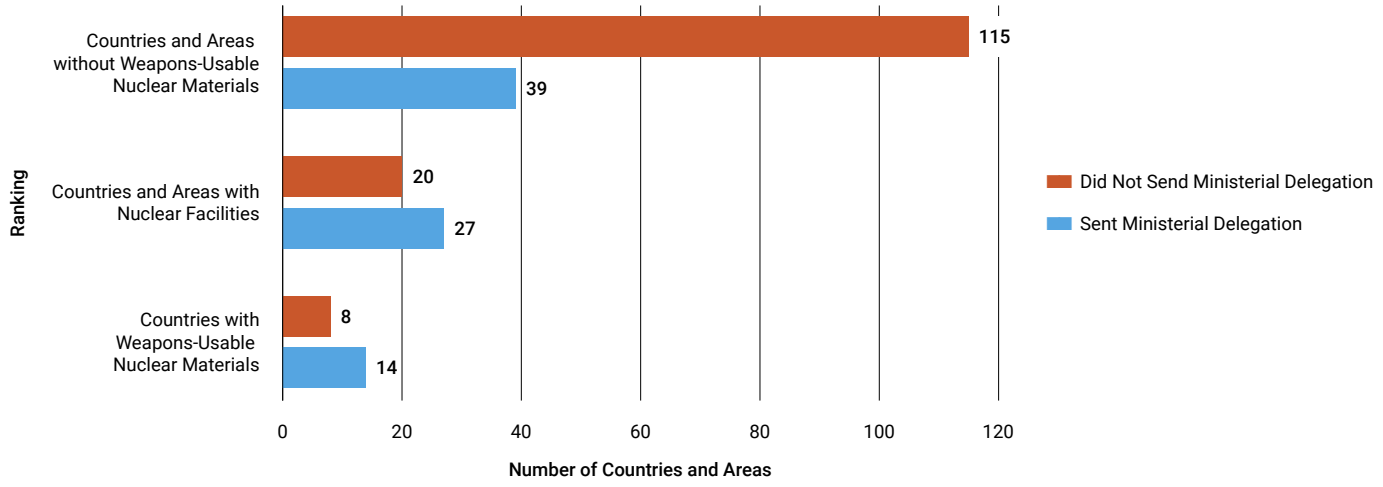
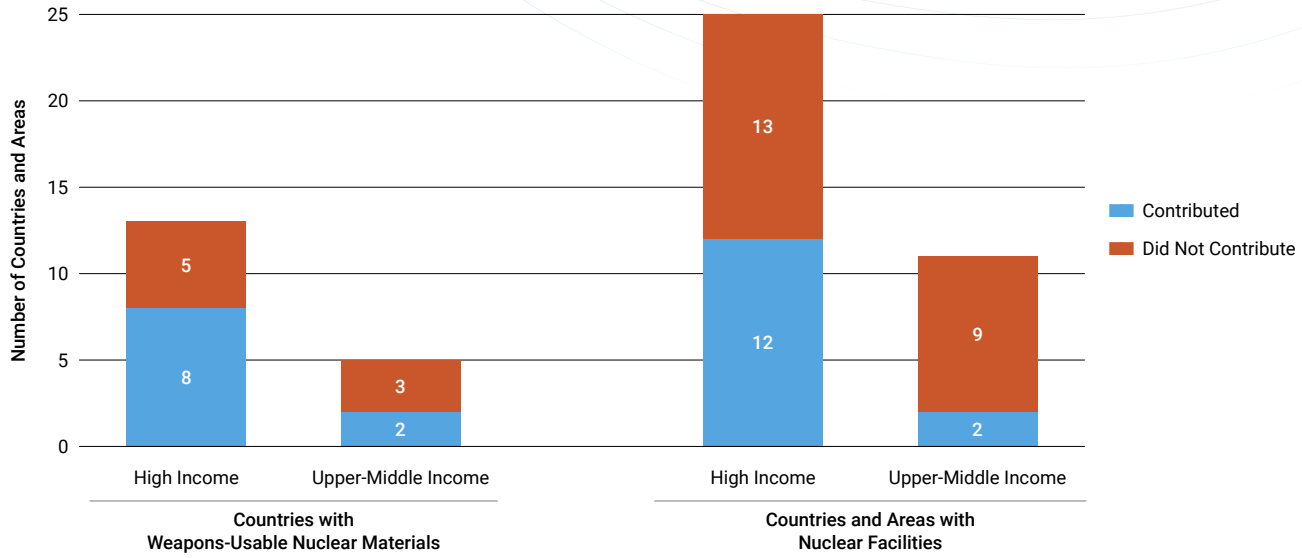


Figure 9b: Contributions to the IAEA's Nuclear Security Fund among Countries and Areas in the Theft and Sabotage Rankings



- Ten of the 22 countries with weapons-usable nuclear materials and 14 of the 46 countries and Taiwan with nuclear facilities have contributed to the IAEA's Nuclear Security Fund in the past two years. (See Figure 9b.)
- Just 39 of the 153 countries and areas without weapons-usable nuclear materials sent ministers to ICONS 2020.
- Although 18 of the 22 countries with weapons-usable nuclear materials and 39 of the 46 countries and Taiwan with nuclear facilities participate in the Nuclear Security Guidance Committee, just 42 of the 153 countries and areas without weapons-usable nuclear materials do so.

Recommendations

- Countries and areas should contribute financial and human resources to support the IAEA's nuclear security mission. Additionally, the IAEA should increase its support for nuclear security within its regular budget.
- Countries should participate in the Nuclear Security Guidance Committee to ensure broad input into the development and publication of the IAEA's nuclear security guidance.
- During the ICONS 2024 meeting, the IAEA should facilitate a ministerial-level dialogue about nuclear security progress, challenges, and cooperation. All countries and areas should send high-level political leaders to participate in the event.

Finding

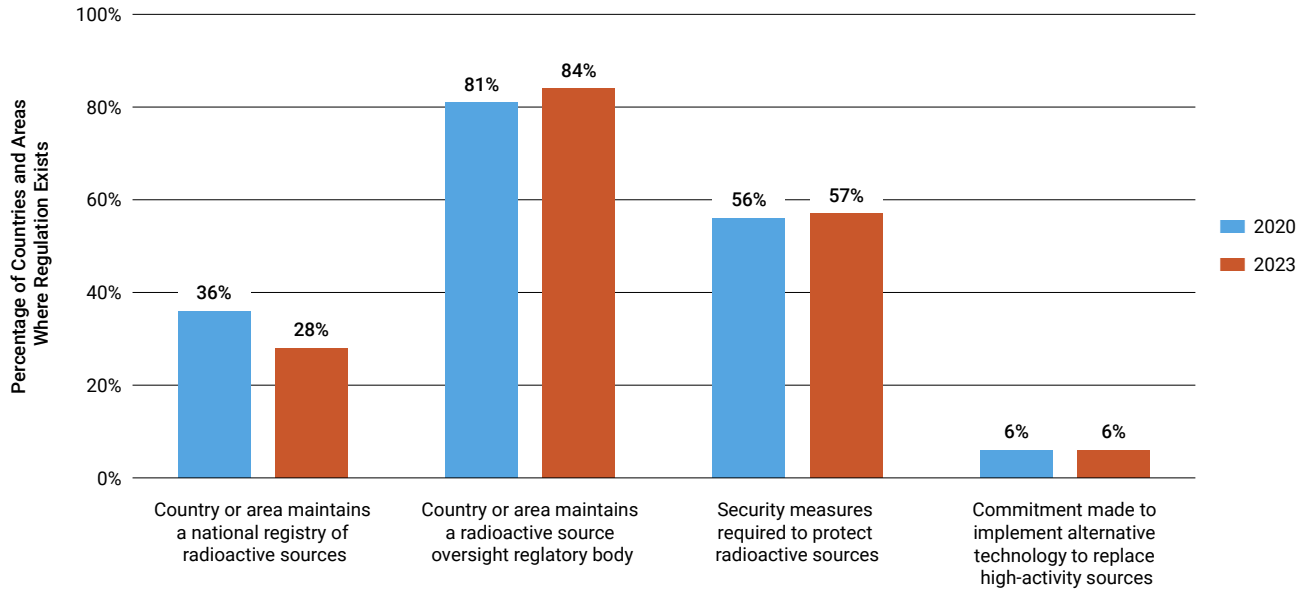
Since 2020, countries and areas have made minimal progress on radioactive source security and are not sufficiently adhering to baseline radiological security measures.

Radioactive sources are located in almost every country and Taiwan and are used in a wide range of settings, from hospitals to oil fields and agricultural facilities. Although these sources cannot be used to fuel a nuclear weapon, they can be used to build a radiological dispersal device, often called a dirty bomb, or a radiation exposure device (RED), and they are generally stored in far less secured facilities than weapons-usable nuclear materials. Compared with a nuclear weapon, a radiological weapon requires less technical sophistication to build, and its detonation won't result in nearly as many direct casualties. However, a dirty bomb or RED is still capable of inflicting widespread panic; environmental contamination; and significant social, economic, and financial costs. For these reasons, terrorist organizations have repeatedly pursued and even built dirty bombs.

The global imperative to reduce radioactive threats has garnered little high-level political attention in recent years, leaving many radioactive sources more vulnerable to theft than weapons-usable nuclear materials. The 2023 Radioactive Source Security Assessment finds that countries and areas have made little progress on improving the security of radioactive sources since the 2020 edition, the first to assess radioactive source security. Of the 175 countries and Taiwan included in the Radioactive Source Security Assessment, 76 have not implemented basic legal requirements to protect radioactive sources, whereas 127 do not maintain national registries to track the movement of such sources. Just 11 countries have made commitments to replace high-activity radioactive sources, the most dangerous, with the safer alternative technologies that are available. (See Figure 10.)

However, positive signs of change are coming from the United States, where the Biden administration identified improving the security of radioactive sources as a priority

Figure 10: Adherence to Key Radioactive Source Security Measures, 2020–2023



in the 2023 National Security Memorandum to Counter Weapons of Mass Destruction Terrorism and Advance Nuclear and Radioactive Material Security. The United States' renewed focus on radioactive source security may rekindle global attention on the issue, but all countries need a clear plan of action to address the large gaps in implementation of basic security measures.

Data Highlights

- One hundred and forty-seven countries maintain a regulatory oversight body for radioactive sources, but almost no progress has been made to establish new regulators in the remaining 28 countries and Taiwan without such bodies since 2020.
- Just 76 countries with radioactive sources have enacted and implemented a basic legal requirement that they protect these materials from theft.
- Forty-nine countries with radioactive sources maintain a national registry to track the movement of these sources within their borders.
- Only 11 countries have committed to replacing the most dangerous high-activity radioactive sources with equally effective alternative technologies, and there has been no progress securing new commitments.

Recommendations

- Countries and areas should establish regulatory measures to track and control the movement of radioactive sources. National registries allow countries to monitor the quantity, location, and activity of sources and their movement across borders—an essential component of stronger security.
- Countries and areas should enact basic laws to protect radioactive sources from theft. Without legally requiring the adequate protection of radioactive sources, barriers to access for a determined terrorist remain frighteningly low.
- Countries and areas should commit to replacing high-activity radioactive sources, which pose the greatest threat because they emit higher doses of radiation. By forgoing high-activity sources in favor of alternative technologies, the research and industrial work that the high-activity sources enabled can proceed without the risk of a lost, stolen, or orphaned source being used in a dirty bomb.
- Countries should commit to implementing the IAEA's Guidance on the Management of Disused Radioactive Sources, which requires users of radioactive sources to dispose of them in a safe, secure, and timely manner. Countries should then notify the IAEA of their commitment.

About the International Panel of Experts

To develop each edition of the NTI Nuclear Security Index, Economist Impact and the Nuclear Threat Initiative (NTI) convene a panel of highly respected nuclear security experts with a broad range of expertise from countries around the world. The panel's input helps ensure that the NTI Index reflects an international point of view and ongoing international discussions about nuclear security priorities.

Panel members do not represent their country's interests, nor do they score individual countries and areas. Instead, they play an advisory role in their personal, not professional, capacities. Participation in the NTI Index as a member of the International Panel of Experts does not imply endorsement of every aspect of the NTI Index, nor does it imply endorsement of the Index's findings and recommendations. On the contrary, panel meetings demonstrate a range of views and highlight the need for a continuing dialogue on nuclear security priorities.

Dauren Aben, Head of the International Security Department, Kazakhstan Institute for Strategic Studies under the President

Lars van Dassen, Executive Director, World Institute for Nuclear Security

Kelsey Davenport, Director, Nonproliferation Policy, Arms Control Association

Jana Fankhauser, Principal Advisor, Pacific Northwest National Laboratory

Hubert Foy, Director and Senior Research Scientist, African Center for Science and International Security

Christopher Hobbs, Director, King's College London, King's Institute for Applied Security Studies

Dmitry Kovchegin, Independent Consultant

Khammar Mrabit, Director General, Moroccan Agency for Nuclear and Radiological Safety and Security

Yosuke Naoi, Director, Integrated Support Center for Nuclear Nonproliferation and Nuclear Security

Ruhee Neog, Director, Institute of Peace and Conflict Studies

Steve Nesbit, President, LMNT Consulting

Sitara Noor, Senior Researcher, Centre for Aerospace & Security Studies

Michael Rowland, Consultant, Practical Reason Inc.

Scott Shrum, Deputy Director, Office of International Security, National Nuclear Security Administration

Pamela West, Nuclear Security Officer for the National Security Advisor of Nigeria

About NTI and EI

Nuclear Threat Initiative

NTI is a non-partisan, non-profit global security organization focused on reducing nuclear and biological threats imperiling humanity. Founded in 2001 by former U.S. Senator Sam Nunn and philanthropist Ted Turner, who continue to serve as co-chairs, NTI is guided by a prestigious international board of directors. Ernest J. Moniz serves as co-chair and chief executive officer; Joan Rohlfing is president and chief operating officer.

www.nti.org

Economist Impact

Economist Impact (EI) combines the rigor of a think tank with the creativity of a media brand to engage a globally influential audience. EI believes that evidence-based insights can open debate, broaden perspectives, and catalyze progress. The services offered by EI previously existed within the Economist Intelligence Unit (EIU) as separate entities, including EIU Thought Leadership, EIU Public Policy, EIU Health Policy, Economist Events, (E) BrandConnect, and SignalNoise. EI is building on a 75-year track record of analysis across 205 countries and areas. Along with framework design, benchmarking, economic and social impact analysis, forecasting, and scenario modeling, EI provides creative storytelling, events expertise, design-thinking solutions, and market-leading media products, making it uniquely positioned to deliver measurable outcomes to its clients.

www.impact.economist.com

NTI Index Methodology FAQs

This section answers key questions about the methodologies for the 2023 Nuclear Security Index and the Radioactive Source Security Assessment. The complete methodologies, prepared by Economist Impact (EI), are available at **www.ntiindex.org**.

What are the three rankings in the Nuclear Security Index?

There are two theft rankings that assess nuclear security conditions with respect to securing nuclear materials and supporting global nuclear security efforts. A sabotage ranking assesses nuclear security conditions with respect to protecting nuclear facilities.

- **Theft: Secure Materials**—The first theft ranking assesses the nuclear security conditions in 22 countries with 1 kilogram or more of weapons-usable nuclear materials (highly enriched uranium [HEU] or separated plutonium) and looks at policies, actions, and other factors related to securing materials against the risk of theft. The framework for this ranking includes quantities of weapons-usable nuclear materials and number of sites, nuclear security laws and regulations, support for global norms, actions to implement international commitments, and a country's risk environment.
- **Theft: Support Global Efforts**—The second theft ranking assesses the nuclear security conditions in 153 countries and Taiwan with less than 1 kilogram of or no weapons-usable nuclear materials; the ranking looks at policies, actions, and other factors related to their support for global nuclear security efforts. Although these countries and areas have no weapons-usable nuclear materials to secure, they play an important role in strengthening the global nuclear security architecture and have a responsibility to prevent smuggling and trafficking of nuclear materials in and across their territories. The presence of terrorist groups capable of stealing nuclear materials also poses a global and regional risk.
- **Sabotage: Protect Facilities**—The sabotage ranking assesses the nuclear security conditions in 46 countries and Taiwan[9] with certain types of nuclear facilities and looks at policies, actions, and other factors related to protecting nuclear facilities against the risk of sabotage. To be included in this ranking, a country or area must have one of several types of nuclear facilities where sabotage could result in a dangerous release of radiation. The framework for this ranking is similar to the ranking for countries with weapons-usable nuclear materials. In this ranking, 20 countries have 1 kilogram or more of weapons-usable nuclear materials and 26 countries and Taiwan do not.

[9] Although Belarus has constructed one of two planned VVER-1200 reactors, Ostrovets-1 was not operational and had not generated electricity as of the 2023 NTI Index's development. Accordingly, Belarus is not included in the 2023 Sabotage: Protect Facilities ranking. Its status will be reviewed for potential inclusion in the following edition.

What are weapons-usable nuclear materials?

For purposes of the Nuclear Security Index, weapons-usable nuclear materials include HEU, which is uranium enriched to 20% or more in the isotope U-235 (including spent fuel); separated plutonium, which is plutonium separated from irradiated nuclear fuel by reprocessing; and the plutonium content in fresh mixed oxide fuel, which consists of blended uranium and plutonium that can be used to fuel nuclear power plants.

How are nuclear facilities defined?

The sabotage ranking includes the 46 countries and Taiwan with nuclear facilities where sabotage could result in a dangerous release of radiation that could cause serious health consequences. These facilities are defined as follows: (a) operating nuclear power reactors or nuclear power reactors that have been shut down in the past five years, (b) research reactors with a capacity of 2 megawatts thermal or greater, (c) reprocessing facilities, and (d) spent fuel pools, only if the fuel has been discharged in the past five years and the pools are not associated with an operating reactor.

What does the Nuclear Security Index measure?

The Nuclear Security Index assesses nuclear security conditions with respect to policies, actions, and other factors related to securing weapons-usable nuclear materials against theft, protecting civilian nuclear facilities against sabotage, and supporting global nuclear security efforts. The Nuclear Security Index does not assess security for low-enriched uranium. The security of radioactive sources is assessed in the separate Radioactive Source Security Assessment. The Nuclear Security Index does not assess proliferation risks, disarmament, or the efforts to prevent illicit trafficking or smuggling of nuclear materials.

How is the Nuclear Security Index developed?

Development of the Nuclear Security Index is rigorous and transparent and embraces an international perspective. NTI and EI work with an International Panel of Experts to design its framework: the categories, indicators, and subindicators that characterize a country's or area's nuclear security conditions. Each category is made up of one or more indicators, each of which is made up of one or more subindicators. The categories and indicators are weighted in a way that reflects their relative importance, as determined by NTI.

EI leads the research, leveraging its global network of analysts and relying on public and open-source information, including national laws and regulations, government reports and public statements, and reports from non-governmental organizations and international organizations, such as the International Atomic Energy Agency (IAEA).

Were governments consulted during the development of the Nuclear Security Index?

NTI prioritizes openness throughout the development process. The 49 countries and areas with weapons-usable nuclear materials, nuclear facilities, or both were offered briefings on the 2023 Nuclear Security Index at the beginning of the process. In addition, after researching and gathering data, NTI and EI provided those 49 countries and areas the opportunity to review and comment on EI's preliminary results as part of a data confirmation process. Data confirmation allows the NTI Index to reflect the most accurate and up-to-date information possible in a transparent way. Of the 49 countries and areas, 26 took advantage of this opportunity.[10]

How are scores for the Nuclear Security Index calculated and what do they mean?

The overall score (0 to 100) for each country or area in the Nuclear Security Index is a weighted sum of the categories. Each category is scored on a scale of 0 to 100, where 100 represents the most favorable nuclear security conditions and 0 represents the least favorable nuclear security conditions. The subindicator scores (ranging from 0 to 8, depending on the question) are summed to determine the indicator score. Each category is normalized on a scale of 0 to 100 on the basis of the sums of underlying indicator scores, and a weight is then

[10] Argentina, Australia, Belgium, Brazil, Bulgaria, Canada, Chile, the Czech Republic, Finland, Germany, Hungary, Italy, Japan, Jordan, Mexico, the Netherlands, Norway, Romania, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan, the United Arab Emirates, and the United Kingdom.

applied. How each category and indicator are weighted is determined by the input from the International Panel of Experts and reflects the relative importance and relevance of each category and indicator. Each ranking in the Nuclear Security Index has a different set of weights.

A score of 100 in the Nuclear Security Index does not indicate that a country or area has perfect nuclear security conditions, and a score of 0 does not mean that a country or area has no security; instead, the scores of 100 and 0 represent the highest and lowest possible scores, respectively, as measured by the Index criteria.

How were the data for the Nuclear Security Index gathered?

EI employed country and area experts and regional specialists from its global network of more than 350 analysts and contributors. Most of the research was conducted between July 2022 and December 2022, although data were updated as late as March 31, 2023, as new information became available. Therefore, actions taken by governments on or after April 1, 2023, are not captured in this edition of the Nuclear Security Index.

What types of information were used to score countries and areas in the Nuclear Security Index?

EI issued scores based on publicly available sources, including (a) primary legal texts and legal reports; (b) government publications and reports; (c) academic publications and reports; (d) websites of government authorities, international organizations, and non-governmental organizations; (e) interviews with experts; and (f) local and international news media reports. In addition, EI proprietary rankings and reports (specifically "Risk Briefing" and the "Business Environment Ranking") were used to score indicators in the Risk Environment category. Governments provided additional information in response to data review and confirmation requests.

The Nuclear Security Index is not a facility-by-facility assessment of security practices, and neither EI nor NTI conducts research at facilities. Such information is not available because of the sensitive nature of specific security arrangements.

What about countries that don't publish information about nuclear security?

In the cases of Iran, Israel, and North Korea, publicly available information is lacking. However, because those countries rely on military (or in the case of Israel, civil defense force) protection for nuclear sites, scores were assigned using a proxy indicator: military capability or sophistication. In some cases, scores relied on expert input or other secondary expert sources. For a detailed description of how challenging countries were scored, see the full EI methodology at **www.ntiindex.org**.

What changes have been made to the Nuclear Security Index?

The "About the NTI Index" section of this report outlines the key changes in the 2023 edition, all of which are described in greater detail in the full EI methodology at **www.ntiindex.org**.

If the framework for the Nuclear Security Index has changed, how are scores compared across years?

To allow for accurate year-over-year comparisons so that progress may be tracked, even with an updated framework, EI rescores countries and areas in previous editions of the NTI Index, using the updated framework and the data that would have been available when research for each respective edition was conducted. Additional review and research of scores from previous editions are also conducted as needed.

What does the Radioactive Source Security Assessment measure?

The Radioactive Source Security Assessment measures national policies, commitments, and actions in 175 countries and Taiwan related to securing radioactive sources to prevent a dirty bomb. The framework includes relevant laws and regulations, support for global norms, commitment and capacity for replacing high-activity radioactive sources with alternative technology, and the risk environment.

Unlike the Nuclear Security Index rankings, the assessment's framework does not produce scores or rankings of countries and areas. Together, however, these

data points provide insight into priorities for improving the governance and security of radioactive sources, serve to reinforce global norms, and provide a foundation for future in-depth analysis.

How is the Radioactive Source Security Assessment developed?

NTI and EI convened a group of experts in 2020 to guide the development of the Radioactive Source Security Assessment. The radiological security experts informed the development of the framework and its associated indicators. The experts helped identify priorities for radioactive source security and available data sources. Unlike the Nuclear Security Index, governments were not consulted in the development of the Radioactive Source Security Assessment.

How were the data for the Radioactive Source Security Assessment gathered?

Like the Nuclear Security Index, the Radioactive Source Security Assessment relies on publicly available information. Unlike the research conducted for the Nuclear Security Index, EI did not conduct in-depth research into laws and regulations in countries and areas and instead relied on publicly available information that is easily accessible from existing databases or other consolidated resources. As a result of these research constraints, certain factors relevant to radiological security—such as the number of IAEA Category 1 and Category 2 radioactive sources in each country and area (information that is not publicly available) or other regulatory requirements that might exist in some countries and areas (requiring in-depth research)—were not included in the assessment.

What types of information were used to measure policies, commitments, and actions in countries and areas for the Radioactive Source Security Assessment?

EI relied on publicly available sources, including (a) IAEA and international organization publications and reports; (b) national statements at multilateral events, such as the 2016 Nuclear Security Summit and the 2020 IAEA International Conference on Nuclear Security; (c) academic publications; (d) data collected by government authorities, international organizations, and non-governmental organizations, such as the Stimson Center; (e) EI proprietary country rankings and reports (specifically "Risk Briefing" and the "Business Environment Ranking"); and (f) interviews with experts.

Was information on radiological security easily accessible?

Limited information is available on radiological security worldwide, including baseline information on the number of radioactive sources. For a limited set of indicators, a result of "No" represents either a negative response to the question (e.g., the regulation in question does not exist) or that no data are available. This option has been applied to indicators where publicly accessible data are clearly lacking. The assessment's limited scope precluded in-depth research for each country and area to determine the availability of data. However, in places where trusted secondary sources have conducted country-by-country research, such as the Stimson Center Radiological Sources Security Database (RadSecLexis), the assessment relied on those data. In those cases, an answer of "No" may indicate the unavailability of public information to that organization.

Explore the methodologies at www.ntiindex.org

The report, the full EI methodologies, Excel models, and master data files are available on the NTI Index website, **www.ntiindex.org**. The website offers interactive viewing of the data for all three rankings of the NTI Nuclear Security Index and the Radioactive Source Security Assessment, including profiles of countries and areas. For the three rankings in the Nuclear Security Index, visitors can walk through scenarios to see how certain actions would increase a score. Visitors also can compare scores of up to three countries and areas.

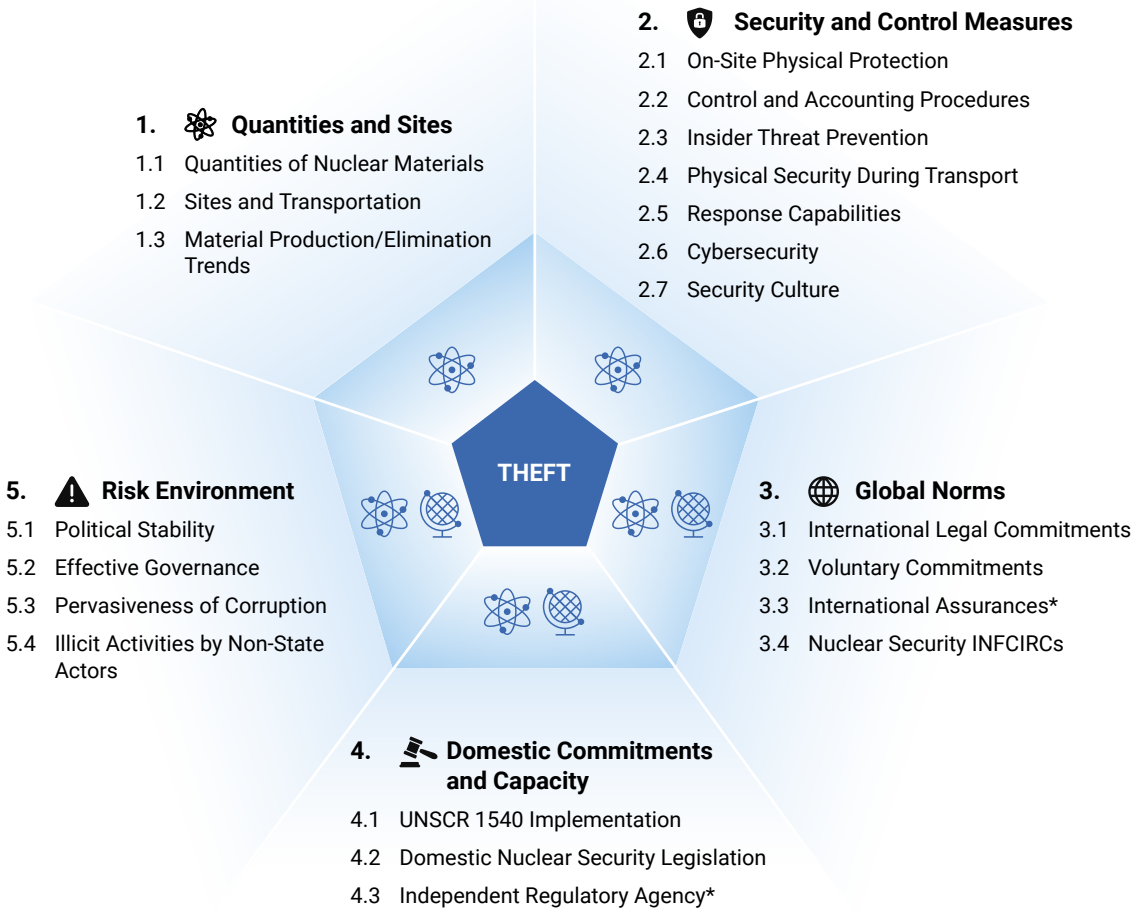
The models offer a wide range of analytic tools, allowing a deeper investigation of measures of nuclear security globally. Users can filter by region, for example, or by membership in international organizations or multilateral initiatives. They also can compare two or more countries or areas and can examine correlations between indicators. In-depth profiles for countries and areas are included in the models to enable a deeper dive into a specific nuclear security condition.

The weights assigned to each category and indicator can be changed to reflect different assumptions about the relative importance of the categories and indicators, including weighting categories and indicators at zero.

The model for the Radioactive Source Security Assessment does not include scores or ranks, but instead indicates the percentage of countries and areas that have adopted certain policies, commitments, or actions. Separate pages for countries and areas allow the user to take a deeper dive into actions related to radiological security. Master data files are suitable for use as a dataset in quantitative analytic work.

Frameworks for Theft: Secure Materials and Theft: Support Global Efforts

How the Theft Rankings Measure Nuclear Security Conditions



The Theft: Secure Materials ranking assesses countries with weapons-usable nuclear materials based on these five categories. The Theft: Support Global Efforts ranking assesses countries and areas with less than 1 kilogram of or no weapons-usable nuclear materials based on three of these categories.

KEY

Theft: Secure Materials

Theft: Support Global Efforts

*This indicator does not apply to countries and areas with less than 1 kilogram of or no weapons-usable nuclear materials.

Note: For information about data sources used for scoring, see the full EI methodology at **www.ntiindex.org**.

Theft: Secure Materials

		Weights
1	**QUANTITIES AND SITES**	**19%**
1.1	**Quantities of Nuclear Materials** ***The larger the quantity of nuclear material held, the greater the materials management requirements and potential risk that materials could be stolen.***	**38%**
1.1.1	Quantities of nuclear materials	
1.2	**Sites and Transportation** ***The greater the number of sites with nuclear materials and the frequency of transport of those materials, the greater the potential risk of security breaches.***	**38%**
1.2.1	Number of sites	
1.2.2	Bulk processing facilities	
1.2.3	Frequency of materials transport	
1.3	**Material Production/Elimination Trends** ***Increasing or decreasing the quantities of nuclear material in a state changes the potential risk of materials being stolen.***	**25%**
1.3.1	Material production/elimination trends	
2	**SECURITY AND CONTROL MEASURES**	**27%**
2.1	**On-Site Physical Protection** ***Essential measures for securing sites and facilities***	**20%**
2.1.1	Mandatory physical protection	
2.1.2	On-site reviews of security	
2.1.3	Design Basis Threat (DBT)	
2.1.4	Tests and assessments	
2.2	**Control and Accounting Procedures** ***Materials control and accounting is a necessary element of a comprehensive security system.***	**12%**
2.2.1	Legal and regulatory basis for material control and accounting (MC&A)	
2.2.2	Measurement methods	
2.2.3	Inventory record	
2.2.4	Material balance area(s)	
2.2.5	Control measures	

		Weights
2.3	**Insider Threat Prevention** ***The qualifications of personnel, the strength of the security culture, and the use of certain surveillance measures are critical to how well security procedures are followed and decrease vulnerability to insider threats.***	**18%**
2.3.1	Personnel vetting	
2.3.2	Frequency of personnel vetting	
2.3.3	Reporting	
2.3.4	Surveillance	
2.3.5	Insider threat awareness program	
2.4	**Physical Security During Transport** ***Materials in transit are particularly vulnerable to theft.***	**12%**
2.4.1	Physical security during transport	
2.5	**Response Capabilities** ***Response capabilities are part of a layered security system and may enable materials to be recovered should they be stolen from a site.***	**12%**
2.5.1	Emergency response capabilities	
2.5.2	Armed response capabilities	
2.5.3	Law enforcement response training	
2.5.4	Nuclear infrastructure protection plan	
2.5.5	Response coordination capabilities	
2.6	**Cybersecurity** ***Nuclear materials and facilities are vulnerable to cyber attacks as well as physical attacks. Therefore, cybersecurity is a critical component of protecting against theft.***	**16%**
2.6.1	Mandatory cybersecurity	
2.6.2	Sensitive digital asset management	
2.6.3	Cybersecurity DBT	
2.6.4	Cybersecurity assessments	
2.6.5	Cyber incident response plan	
2.6.6	Mandatory cybersecurity awareness program	

		Weights
2.7	**Security culture** ***Effective security culture ensures organizations remain committed to following through on security requirements and responsibilities at all levels of the organizational structure.***	**10%**
2.7.1	Security culture	
2.7.2	Security culture assessments	
2.7.3	Security responsibilities and accountabilities	
3	**GLOBAL NORMS**	**19%**
3.1	**International Legal Commitments** ***International legal commitments are the basis for domestic legislation, regulations, and security capacity.***	**33%**
3.1.1	Convention on the Physical Protection of Nuclear Material (CPPNM)	
3.1.2	2005 Amendment to the CPPNM	
3.1.3	International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)	
3.1.4	International Atomic Energy Agency (IAEA) safeguards agreement	
3.2	**Voluntary Commitments** ***Voluntary commitments demonstrate a state's support for nuclear materials security.***	**22%**
3.2.1	Global Initiative to Combat Nuclear Terrorism (GICNT) membership	
3.2.2	Global Partnership Against the Spread of Weapons and Materials of Mass Destruction membership	
3.2.3	World Institute for Nuclear Security (WINS) contributions	
3.2.4	IAEA Nuclear Security Fund contributions	
3.2.5	Bilateral/multilateral assistance	
3.2.6	Centers of Excellence	
3.2.7	Ministerial participation in the IAEA International Conference on Nuclear Security (ICONS)	
3.2.8	Incident and Trafficking Database (ITDB)	
3.2.9	Nuclear Security Guidance Committee (NSGC)	

		Weights
3.3	**International Assurances** ***International assurances enhance international confidence in the effectiveness of a country's nuclear security.***	**27%**
3.3.1	Published regulations	
3.3.2	Published nuclear security annual reports	
3.3.3	Published nuclear security progress reports	
3.3.4	Public declarations/reports about civilian nuclear materials	
3.3.5	Public declarations/reports about military nuclear materials	
3.3.6	Review of security arrangements	
3.3.7	International Physical Protection Advisory Service (IPPAS) mission	
3.4	**Nuclear Security Information Circulars (INFCIRCs)** ***Countries that have subscribed to nuclear security IAEA INFCIRCs demonstrate a commitment to international best practices in nuclear security.***	**18%**
3.4.1	INFCIRC/869	
3.4.2	INFCIRC/908	
3.4.3	Other nuclear security INFCIRCs	
4	**DOMESTIC COMMITMENTS AND CAPACITY**	**19%**
4.1	**United Nations Security Council Resolution (UNSCR) 1540 Implementation** ***UNSCR 1540 obliges action on nuclear materials security and its implementation demonstrates a state's commitment level.***	**25%**
4.1.1	UNSCR 1540 reporting	
4.1.2	Extent of UNSCR 1540 implementation	
4.2	**Domestic Nuclear Security Legislation** ***The implementation of security measures is rooted in domestic nuclear security legislation.***	**33%**
4.2.1	CPPNM implementation authority	
4.2.2	National legal framework for CPPNM Amendment	

		Weights
4.3	**Independent Regulatory Agency** ***A robust and independent regulatory structure helps ensure compliance with nuclear security-related regulations.***	41%
4.3.1	Independent regulatory agency	
5	**RISK ENVIRONMENT**	**16%**
5.1	**Political Stability** ***A lack of political stability may enable lapses in nuclear security.***	25%
5.1.1	Social unrest	
5.1.2	Orderly transfers of power	
5.1.3	International disputes/tensions	
5.1.4	Armed conflict	
5.1.5	Violent demonstrations or violent civil/labor unrest	
5.2	**Effective Governance** ***A lack of effective governance can compromise a country's ability to establish and sustain policies to secure nuclear facilities.***	25%
5.2.1	Effectiveness of the political system	
5.2.2	Quality of the bureaucracy	
5.3	**Pervasiveness of Corruption** ***Corruption affects the potential for theft of nuclear materials and the rigor with which nuclear security measures are implemented.***	25%
5.3.1	Pervasiveness of corruption	
5.4	**Illicit Activities by Non-State Actors** ***The presence and capabilities of terrorist groups and prevalence of other illicit activities raises the risk of theft of nuclear materials.***	25%
5.4.1	Likelihood of terrorist attacks	
5.4.2	Firearms seized during interdiction of illicit weapons trafficking	
5.4.3	Domestic terrorism threat	
5.4.4	Neighboring terror threat	

Theft: Support Global Efforts

		Weights
3	**GLOBAL NORMS**	**45%**
3.1	**International Legal Commitments** ***International legal commitments are the basis for domestic legislation, regulations, and security capacity.***	**40%**
3.1.1	Convention on the Physical Protection of Nuclear Material (CPPNM)	
3.1.2	2005 Amendment to the CPPNM	
3.1.3	International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)	
3.1.4	International Atomic Energy Agency (IAEA) safeguards agreement	
3.2	**Voluntary Commitments** ***Voluntary commitments demonstrate a state's support for nuclear materials security.***	**34%**
3.2.1	Global Initiative to Combat Nuclear Terrorism (GICNT) membership	
3.2.2	Global Partnership Against the Spread of Weapons and Materials of Mass Destruction membership	
3.2.3	World Institute for Nuclear Security (WINS) contributions	
3.2.4	IAEA Nuclear Security Fund contributions	
3.2.5	Bilateral/multilateral assistance	
3.2.6	Centers of Excellence	
3.2.7	Ministerial participation in the IAEA International Conference on Nuclear Security (ICONS)	
3.2.8	Incident and Trafficking Database (ITDB)	
3.2.9	Nuclear Security Guidance Committee (NSGC)	
3.3	**Nuclear Security Information Circulars (INFCIRCs)** ***Countries that have subscribed to nuclear security IAEA INFCIRCs demonstrate a commitment to international best practices in nuclear security.***	**26%**
3.3.1	INFCIRC/869	
3.3.2	Other nuclear security INFCIRCs	
4	**DOMESTIC COMMITMENTS AND CAPACITY**	**30%**
4.1	**United Nations Security Council Resolution (UNSCR) 1540 Implementation** ***UNSCR 1540 obliges action on nuclear materials security and its implementation demonstrates a state's commitment level.***	**43%**

		Weights
4.1.1	UNSCR 1540 reporting	
4.1.2	Extent of UNSCR 1540 implementation	
4.2	**Domestic Nuclear Security Legislation** ***The implementation of security measures is rooted in domestic nuclear security legislation.***	**57%**
4.2.1	CPPNM implementation authority	
5	**RISK ENVIRONMENT**	**25%**
5.1	**Political Stability** ***A lack of political stability may enable lapses in nuclear security.***	**25%**
5.1.1	Social unrest	
5.1.2	Orderly transfers of power	
5.1.3	International disputes/tensions	
5.1.4	Armed conflict	
5.1.5	Violent demonstrations or violent civil/labor unrest	
5.2	**Effective Governance** ***A lack of effective governance can compromise a country's ability to establish and sustain policies to secure nuclear facilities.***	**25%**
5.2.1	Effectiveness of the political system	
5.2.2	Quality of the bureaucracy	
5.3	**Pervasiveness of Corruption** ***Corruption affects the potential for theft of nuclear materials and the rigor with which nuclear security measures are implemented.***	**25%**
5.3.1	Pervasiveness of corruption	
5.4	**Illicit Activities by Non-State Actors** ***The presence and capabilities of terrorist groups and prevalence of other illicit activities raises the risk of theft of nuclear materials.***	**25%**
5.4.1	Likelihood of terrorist attacks	
5.4.2	Firearms seized during interdiction of illicit weapons trafficking	
5.4.3	Pervasiveness of organized crime	

Framework for Sabotage: Protect Facilities

How the Sabotage: Protect Facilities Ranking Measures Nuclear Security Conditions

The Sabotage: Protect Facilities ranking assesses countries and areas with nuclear facilities based on these five categories.

Note: For information about data sources used for scoring, see the full EI methodology at **www.ntiindex.org**.

		Weights
1	**NUMBER OF SITES**	**5%**
1.1	**Number of Sites** ***The greater the number of nuclear facilities, the greater the potential risk of acts of sabotage.***	100%
1.1.1	Number of sites	
2	**SECURITY AND CONTROL MEASURES**	**30%**
2.1	**On-Site Physical Protection** ***Essential measures for securing sites and facilities***	22%
2.1.1	Mandatory physical protection	
2.1.2	On-site reviews of security	
2.1.3	Design Basis Threat (DBT)	
2.1.4	Tests and assessments	
2.2	**Control and Accounting Procedures** ***Control and accounting is a necessary element of a comprehensive security system.***	14%
2.2.1	Legal and regulatory basis for material control and accounting (MC&A)	
2.2.2	Radiological consequences (materials)	
2.2.3	Radiological consequences (equipment, systems, and devices)	
2.2.4	Control measures	
2.2.5	Access control	
2.3	**Insider Threat Prevention** ***The qualifications of personnel, the strength of the security culture, and the use of certain surveillance measures are critical to how well security procedures are followed and decrease vulnerability to insider threats.***	20%
2.3.1	Personnel vetting	
2.3.2	Frequency of personnel vetting	
2.3.3	Reporting	
2.3.4	Surveillance	
2.3.5	Insider threat awareness program	

		Weights
2.4	**Response Capabilities** ***Response capabilities are part of a layered security system and may enable materials to be recovered should they be stolen from a site.***	**14%**
2.4.1	Emergency response capabilities	
2.4.2	Armed response capabilities	
2.4.3	Law enforcement response training	
2.4.4	Nuclear infrastructure protection plan	
2.4.5	Response coordination capabilities	
2.5	**Cybersecurity** ***Nuclear facilities are vulnerable to cyber attacks as well as physical attacks. Therefore, cybersecurity is a critical component of protecting against sabotage of nuclear materials.***	**18%**
2.5.1	Mandatory cybersecurity	
2.5.2	Sensitive digital asset management	
2.5.3	Cybersecurity DBT	
2.5.4	Cybersecurity assessments	
2.5.5	Cyber incident response plan	
2.5.6	Mandatory cybersecurity awareness program	
2.6	**Security Culture** ***Effective security culture ensures organizations remain committed to following through on security requirements and responsibilities at all levels of the organizational structure.***	**12%**
2.6.1	Security culture	
2.6.2	Security culture assessments	
2.6.3	Security responsibilities and accountabilities	
3	**GLOBAL NORMS**	**23%**
3.1	**International Legal Commitments** ***International legal commitments are the basis for domestic legislation, regulations, and security capacity.***	**33%**
3.1.1	Convention on the Physical Protection of Nuclear Material (CPPNM)	
3.1.2	2005 Amendment to the CPPNM	

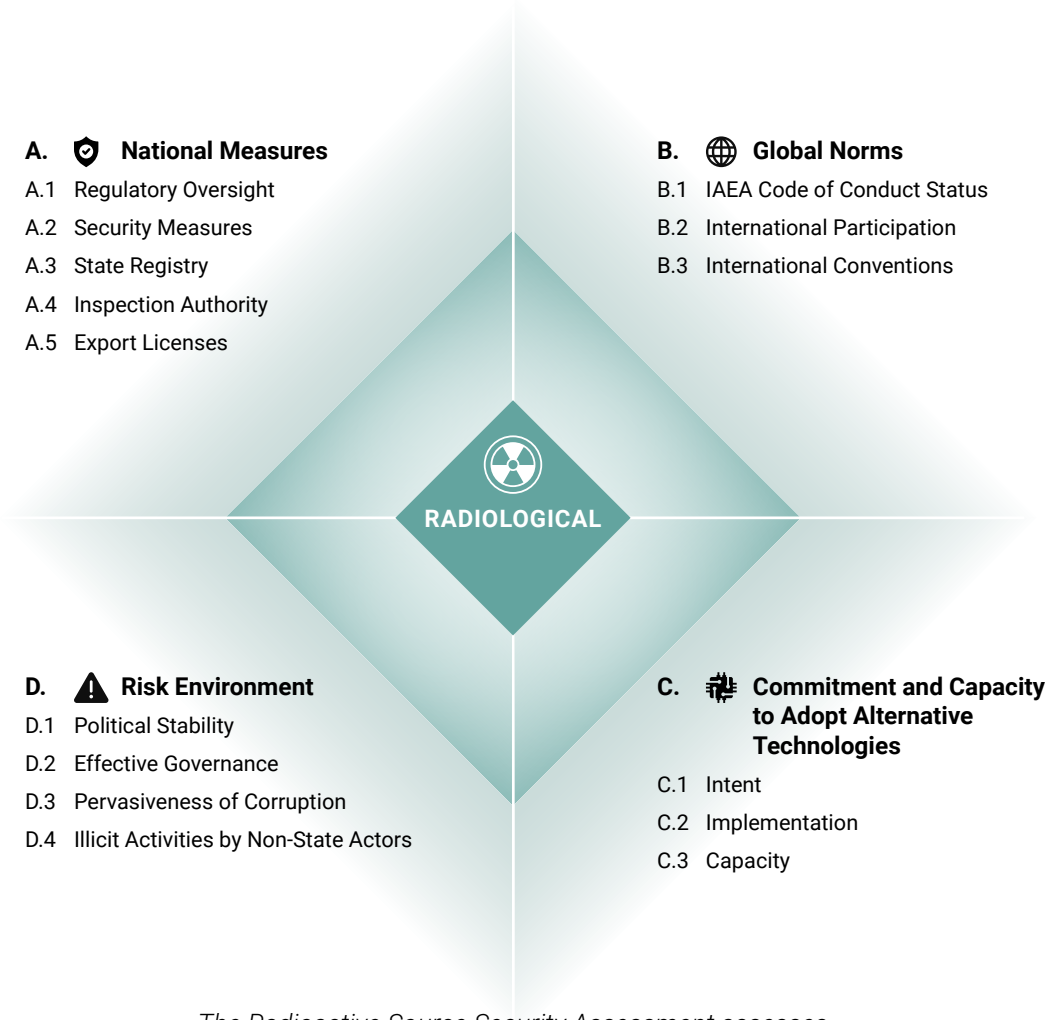
		Weights
3.1.3	International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)	
3.1.4	Convention on Nuclear Safety	
3.2	**Voluntary Commitments** ***Voluntary commitments demonstrate a state's support for nuclear security.***	**22%**
3.2.1	Global Initiative to Combat Nuclear Terrorism (GICNT) membership	
3.2.2	Global Partnership Against the Spread of Weapons and Materials of Mass Destruction membership	
3.2.3	World Institute for Nuclear Security (WINS) contributions	
3.2.4	IAEA Nuclear Security Fund contributions	
3.2.5	Bilateral/multilateral assistance	
3.2.6	Centers of Excellence	
3.2.7	Ministerial participation in the IAEA International Conference on Nuclear Security (ICONS)	
3.2.8	Incident and Trafficking Database (ITDB)	
3.2.9	Nuclear Security Guidance Committee (NSGC)	
3.3	**International Assurances** ***International assurances enhance international confidence in the effectiveness of a country's nuclear security.***	**27%**
3.3.1	Published regulations	
3.3.2	Published nuclear security annual reports	
3.3.3	Published nuclear security progress reports	
3.3.4	Review of security arrangements	
3.3.5	International Physical Protection Advisory Service (IPPAS) mission	
3.4	**Nuclear Security Information Circulars (INFCIRCs)** ***Countries that have subscribed to nuclear security IAEA INFCIRCs demonstrate a commitment to international best practices in nuclear security.***	**18%**
3.4.1	INFCIRC/869	
3.4.2	INFCIRC/908	
3.4.3	Other nuclear security INFCIRCs	

		Weights
4	**DOMESTIC COMMITMENTS AND CAPACITY**	**23%**
4.1	**United Nations Security Council Resolution (UNSCR) 1540 Implementation** ***UNSCR 1540 obliges action on nuclear security and its implementation demonstrates a state's commitment level.***	**25%**
4.1.1	UNSCR 1540 reporting	
4.1.2	Extent of UNSCR 1540 implementation	
4.2	**Domestic Nuclear Security Legislation** ***The implementation of security measures is rooted in domestic nuclear security legislation.***	**33%**
4.2.1	CPPNM implementation authority	
4.2.2	National legal framework for CPPNM Amendment	
4.3	**Independent Regulatory Agency** ***A robust and independent regulatory structure helps ensure compliance with nuclear security-related regulations.***	**42%**
4.3.1	Independent regulatory agency	
5	**RISK ENVIRONMENT**	**19%**
5.1	**Political Stability** ***A lack of political stability may enable lapses in nuclear security.***	**25%**
5.1.1	Social unrest	
5.1.2	Orderly transfers of power	
5.1.3	International disputes/tensions	
5.1.4	Armed conflict	
5.1.5	Violent demonstrations or violent civil/labor unrest	
5.2	**Effective Governance** ***A lack of effective governance can compromise a country's ability to establish and sustain policies to secure nuclear facilities.***	**25%**
5.2.1	Effectiveness of the political system	
5.2.2	Quality of the bureaucracy	

		Weights
5.3	**Pervasiveness of Corruption** ***Corruption affects the potential for acts of sabotage and the rigor with which nuclear security measures are implemented.***	**25%**
5.3.1	Pervasiveness of corruption	
5.4	**Illicit Activities by Non-State Actors** ***The presence and capabilities of terrorist groups and prevalence of other illicit activities raises the risk of sabotage of nuclear facilities.***	**25%**
5.4.1	Likelihood of terrorist attacks	
5.4.2	Firearms seized during interdiction of illicit weapons trafficking	
5.4.3	Domestic terrorism threat	
5.4.4	Neighboring terror threat	

Framework for the Radioactive Source Security Assessment

How the Radioactive Source Security Assessment Measures Radiological Security



The Radioactive Source Security Assessment assesses countries and areas based on these four categories.

Note: For information about data sources used for scoring, see the full EI methodology at **www.ntiindex.org**.

A	NATIONAL MEASURES
A.1	**Regulatory Oversight**
A.1.1	Does the country maintain a radioactive source regulatory oversight body?
A.2	**Security Measures**
A.2.1	Are there regulations that require security measures to be in place to protect radioactive sources?
A.3	**State Registry**
A.3.1	Does the state maintain a registry of radioactive sources?
A.4	**Inspection Authority**
A.4.1	Does the state have authority to inspect facilities with radioactive sources?
A.5	**Export Licenses**
A.5.1	Are there licensing requirements for exporting International Atomic Energy Agency (IAEA) Category 1 sources?
B	**GLOBAL NORMS**
B.1	**IAEA Code of Conduct Status**
B.1.1	Has the state made a political commitment and notified the IAEA of their intent to abide by the Code of Conduct on the Safety and Security of Radioactive Sources?
B.1.2	Has the state notified the IAEA of their intent to abide by the Guidance on the Import and Export of Radioactive Sources?
B.1.3	Has the state nominated a Point of Contact to facilitate imports and exports of radioactive source material?
B.1.4	Has the state made available their responses to the IAEA Importing and Exporting States Questionnaire?
B.1.5	Has the state notified the IAEA of their commitment to implement the Guidance on the Management of Disused Radioactive Sources?
B.2	**International Participation**
B.2.1	Does the state participate in the Global Initiative to Combat Nuclear Terrorism (GICNT)?
B.2.2	Did the state send an official delegation to the 2018 International Conference on the Security of Radioactive Material?
B.3	**International Conventions**
B.3.1	Is the country a state party to the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)?
B.3.2	Is the country a state party to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management?
B.3.3	Is the country a state party to the Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency?

C	COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES
C.1	**Intent**
C.1.1	Has the state subscribed to INFCIRC/910?
C.2	**Implementation**
C.2.1	Has the country publicly declared a regulatory requirement, policy, or commitment to implementing alternative technology to replace high-activity radioactive sources?
C.3	**Capacity**
C.3.1	What is the average percentage of businesses experiencing power outages each month?
C.3.2	What percentage of the population over 25 holds a tertiary degree or higher?
D	**RISK ENVIRONMENT**
D.1	**Political Stability**
D.1.1	What is the risk of significant social unrest during the next two years?
D.1.2	How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?
D.1.3	Is there a risk that international disputes/tensions will negatively affect the polity during the next two years?
D.1.4	Is this country presently subject to armed conflict, or is there at least a moderate risk of such conflict during the next two years?
D.1.5	Are violent demonstrations or violent civil/labor unrest likely to occur during the next two years?
D.2	**Effective Governance**
D.2.1	How effective is the country's political system in formulating and executing policy?
D.2.2	What is the quality of the country's bureaucracy and its ability to carry out government policy?
D.3	**Pervasiveness of Corruption**
D.3.1	How pervasive is corruption among public officials?
D.4	**Illicit Activities by Non-State Actors**
D.4.1	How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption to business operations?
D.4.2	How likely is organized crime to be a problem for government and/or business?
D.4.3	How many firearms were seized during the interdiction of illicit weapons trafficking?

Country and Area Summaries

This section includes summaries for the 22 countries with weapons-usable nuclear materials and 46 countries and Taiwan with nuclear facilities. Twenty countries appear in both the theft ranking for countries with weapons-usable nuclear materials and the sabotage ranking and therefore have two separate country summaries. Taiwan is included in the rankings for countries without weapons-usable nuclear materials and countries with nuclear facilities because of its autonomous regulatory structure and cooperative activities with the International Atomic Energy Agency.

Category and indicator scores are normalized on a 0–100 scale, with 100 being the highest score. Indicators are grouped into green, yellow, and red, indicating a high score (67–100), medium score (34–66), and low score (0–33), respectively. Summaries for the 153 countries and Taiwan without weapons-usable nuclear materials are available at **www.ntiindex.org**.

This section also includes a table showing the country and area results for the questions in the Radioactive Source Security Assessment. Individual summaries for each of the 175 countries and Taiwan in that assessment are available at **www.ntiindex.org**.

THEFT: SECURE MATERIALS

AUSTRALIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
1	93	-1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**94**	**0**
● Quantities of Nuclear Materials	100	0
● Sites and Transportation	100	0
● Material Production/Elimination Trends	75	0
Security and Control Measures	**89**	**0**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	90	0
● Insider Threat Prevention	73	0
● Physical Security During Transport	100	0
● Response Capabilities	100	0
● Cybersecurity	88	0
● Security Culture	75	0
Global Norms	**95**	**-5**
● International Legal Commitments	100	0
● Voluntary Commitments	83	-17
● International Assurances	94	-6
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**89**	**-1**
● Political Stability	85	0
● Effective Governance	100	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	70	-5

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

BELARUS

2023 RANK	2023 SCORE	CHANGE SINCE 2020
15	62	-2

	2023 Score	Change since 2020
Quantities and Sites	**75**	**0**
Quantities of Nuclear Materials	63	0
Sites and Transportation	88	0
Material Production/Elimination Trends	75	0
Security and Control Measures	**72**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	80	0
Insider Threat Prevention	82	0
Physical Security During Transport	100	0
Response Capabilities	75	0
Cybersecurity	50	0
Security Culture	25	0
Global Norms	**50**	**+2**
International Legal Commitments	71	0
Voluntary Commitments	50	0
International Assurances	56	+6
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**78**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	33	0
Independent Regulatory Agency	100	0
Risk Environment	**26**	**-13**
Political Stability	5	-50
Effective Governance	0	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	75	0

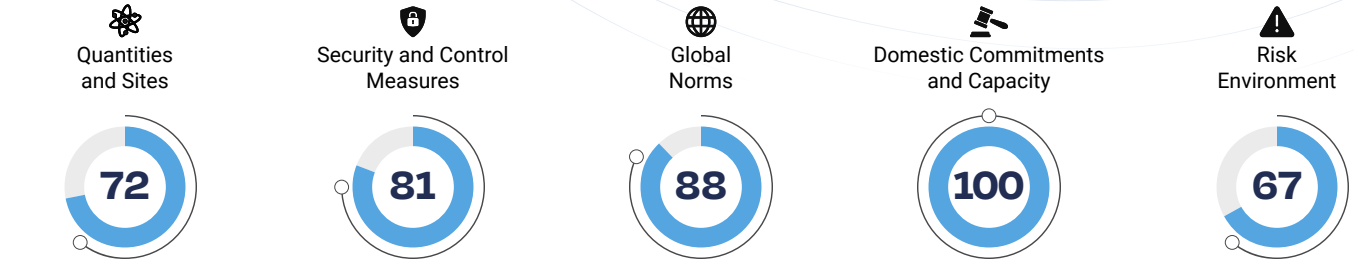
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

BELGIUM

2023 RANK	2023 SCORE	CHANGE SINCE 2020
7	82	+3



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**72**	**0**
Quantities of Nuclear Materials	50	0
Sites and Transportation	75	0
Material Production/Elimination Trends	100	0
Security and Control Measures	**81**	**+5**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	64	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	50	0
Security Culture	100	+50
Global Norms	**88**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	83	0
Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**67**	**-4**
Political Stability	65	-10
Effective Governance	63	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	65	-5

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

CANADA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
3	89	+1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**76**	**+4**
Quantities of Nuclear Materials	50	0
Sites and Transportation	88	+13
Material Production/Elimination Trends	100	0
Security and Control Measures	**91**	**0**
On-Site Physical Protection	100	0
Control and Accounting Procedures	90	0
Insider Threat Prevention	82	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	88	0
Security Culture	75	0
Global Norms	**91**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	67	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**85**	**-1**
Political Stability	85	-5
Effective Governance	100	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	55	0

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

CHINA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
12	67	+2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**33**	**0**
Quantities of Nuclear Materials	25	0
Sites and Transportation	13	0
Material Production/Elimination Trends	75	0
Security and Control Measures	**80**	**0**
On-Site Physical Protection	100	0
Control and Accounting Procedures	90	0
Insider Threat Prevention	45	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	63	0
Security Culture	75	0
Global Norms	**65**	**-2**
International Legal Commitments	71	0
Voluntary Commitments	100	0
International Assurances	33	-6
Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**49**	**+5**
Political Stability	50	-5
Effective Governance	25	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	70	+25

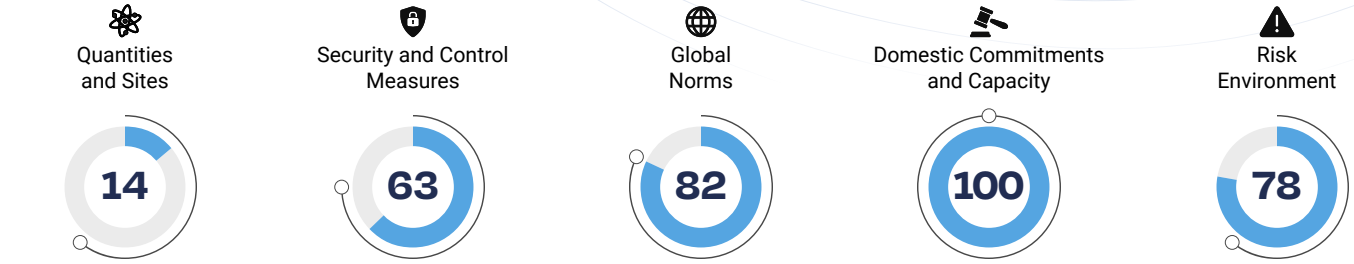
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

FRANCE

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=13	66	-4



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**14**	**-19**
Quantities of Nuclear Materials	13	0
Sites and Transportation	25	0
Material Production/Elimination Trends	0	-75
Security and Control Measures	**63**	**-1**
On-Site Physical Protection	60	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	36	-9
Physical Security During Transport	100	0
Response Capabilities	63	0
Cybersecurity	63	0
Security Culture	25	0
Global Norms	**82**	**0**
International Legal Commitments	71	0
Voluntary Commitments	100	0
International Assurances	67	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**78**	**+5**
Political Stability	75	-5
Effective Governance	100	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	60	+25

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

GERMANY

2023 RANK	2023 SCORE	CHANGE SINCE 2020
4	87	+2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**76**	**+4**
● Quantities of Nuclear Materials	63	+13
● Sites and Transportation	75	0
● Material Production/Elimination Trends	100	0
Security and Control Measures	**82**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Physical Security During Transport	100	0
● Response Capabilities	100	0
● Cybersecurity	75	0
● Security Culture	50	0
Global Norms	**90**	**-1**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	61	-6
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**88**	**+4**
● Political Stability	75	-5
● Effective Governance	100	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	75	+20

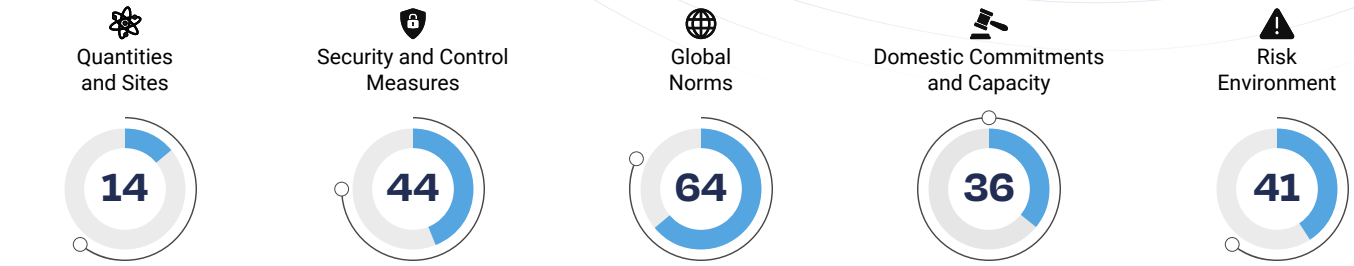
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

INDIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
20	40	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**14**	**-5**
Quantities of Nuclear Materials	25	-13
Sites and Transportation	13	0
Material Production/Elimination Trends	0	0
Security and Control Measures	**44**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	20	0
Insider Threat Prevention	27	0
Physical Security During Transport	0	0
Response Capabilities	63	0
Cybersecurity	75	0
Security Culture	50	0
Global Norms	**64**	**-1**
International Legal Commitments	71	0
Voluntary Commitments	100	0
International Assurances	28	-5
Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**36**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	33	0
Independent Regulatory Agency	0	0
Risk Environment	**41**	**+5**
Political Stability	60	-5
Effective Governance	50	+12
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	30	+15

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

IRAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
21	29	-3

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**52**	**-37**
Quantities of Nuclear Materials	75	-13
Sites and Transportation	63	-37
Material Production/Elimination Trends	0	-75
Security and Control Measures	**26**	**0**
On-Site Physical Protection	40	0
Control and Accounting Procedures	10	0
Insider Threat Prevention	18	0
Physical Security During Transport	50	0
Response Capabilities	63	0
Cybersecurity	0	0
Security Culture	0	0
Global Norms	**26**	**-2**
International Legal Commitments	29	0
Voluntary Commitments	50	0
International Assurances	22	-6
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**25**	**+20**
UNSCR 1540 Implementation	100	+80
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	0	0
Risk Environment	**16**	**+4**
Political Stability	20	0
Effective Governance	13	0
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	30	+15

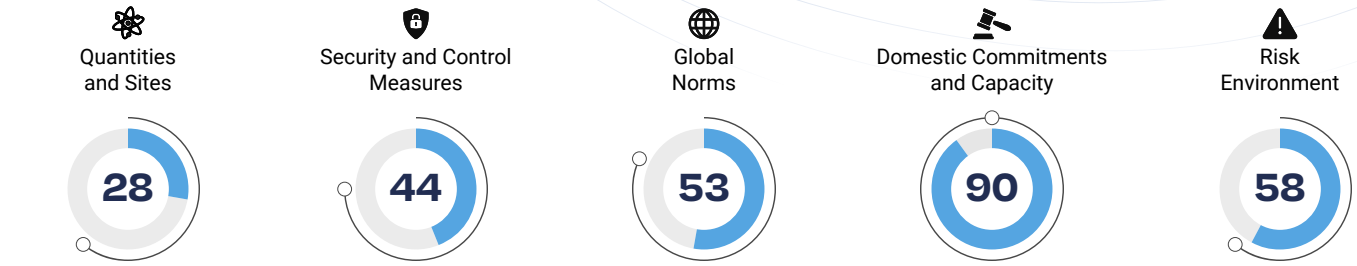
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

ISRAEL

2023 RANK	2023 SCORE	CHANGE SINCE 2020
17	54	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**28**	**0**
Quantities of Nuclear Materials	50	0
Sites and Transportation	25	0
Material Production/Elimination Trends	0	0
Security and Control Measures	**44**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	0	0
Insider Threat Prevention	27	0
Physical Security During Transport	100	0
Response Capabilities	75	0
Cybersecurity	13	0
Security Culture	0	0
Global Norms	**53**	**0**
International Legal Commitments	57	0
Voluntary Commitments	67	0
International Assurances	6	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**90**	**-5**
UNSCR 1540 Implementation	60	-20
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**58**	**+1**
Political Stability	50	-5
Effective Governance	88	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	20	+10

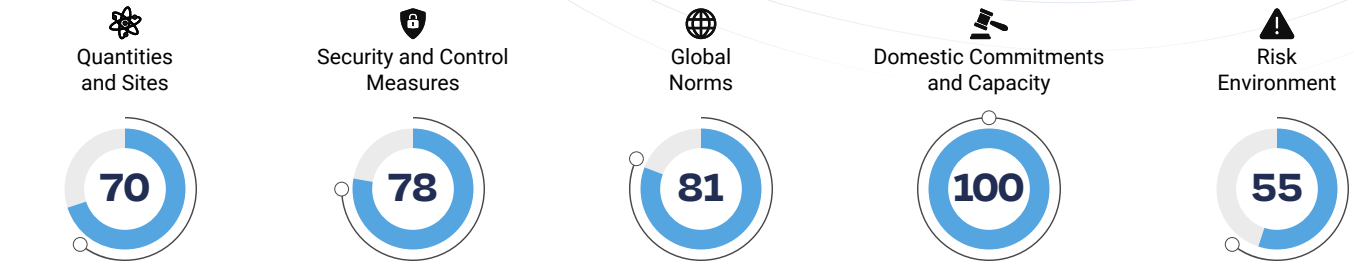
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

ITALY

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=9	77	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**70**	**0**
Quantities of Nuclear Materials	63	0
Sites and Transportation	75	0
Material Production/Elimination Trends	75	0
Security and Control Measures	**78**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	64	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	75	0
Security Culture	25	0
Global Norms	**81**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	28	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**55**	**+5**
Political Stability	65	-5
Effective Governance	50	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	55	+25

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

JAPAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
8	80	+2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**42**	**0**
Quantities of Nuclear Materials	25	0
Sites and Transportation	38	0
Material Production/Elimination Trends	75	0
Security and Control Measures	**78**	**+4**
On-Site Physical Protection	80	0
Control and Accounting Procedures	70	0
Insider Threat Prevention	82	+9
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	63	+13
Security Culture	50	0
Global Norms	**99**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	94	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**79**	**+1**
Political Stability	90	+10
Effective Governance	88	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	65	-5

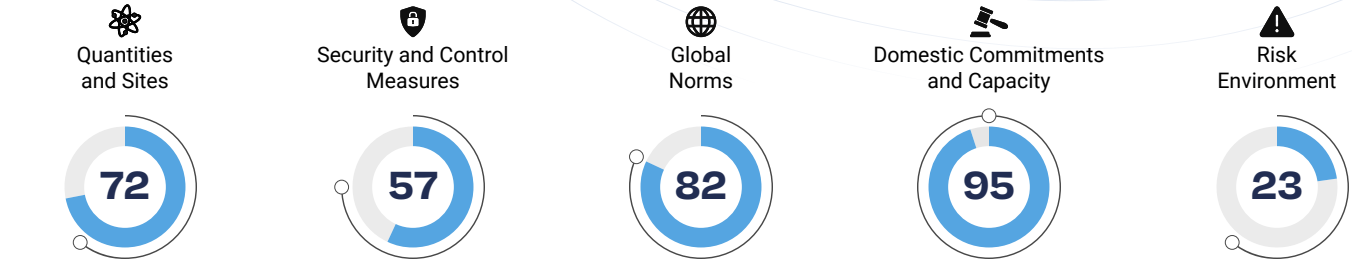
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

KAZAKHSTAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=13	66	-2



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**72**	**0**
Quantities of Nuclear Materials	38	0
Sites and Transportation	88	0
Material Production/Elimination Trends	100	0
Security and Control Measures	**57**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	70	0
Insider Threat Prevention	36	0
Physical Security During Transport	100	0
Response Capabilities	63	0
Cybersecurity	25	0
Security Culture	25	0
Global Norms	**82**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	33	-6
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**95**	**0**
UNSCR 1540 Implementation	80	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**23**	**-10**
Political Stability	30	-25
Effective Governance	25	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	10	-15

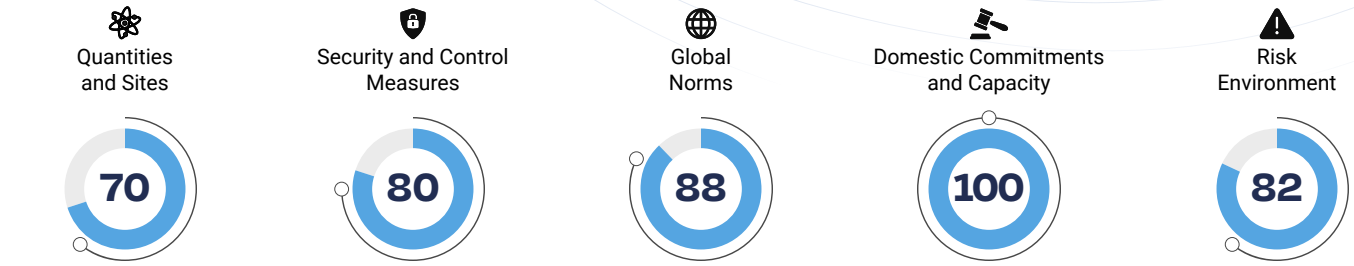
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

NETHERLANDS

2023 RANK	2023 SCORE	CHANGE SINCE 2020
5	84	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**70**	**0**
Quantities of Nuclear Materials	63	0
Sites and Transportation	75	0
Material Production/Elimination Trends	75	0
Security and Control Measures	**80**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	73	0
Physical Security During Transport	100	0
Response Capabilities	63	0
Cybersecurity	88	0
Security Culture	50	0
Global Norms	**88**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	56	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**82**	**-2**
Political Stability	75	-5
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	65	-5

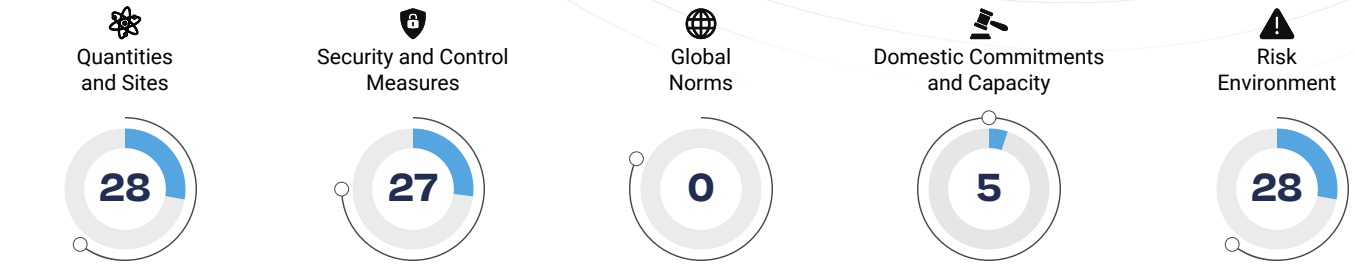
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

NORTH KOREA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
22	18	0



● High Score ● Medium Score ● Low Score ○ Index Median

	0 20 40 60 80 100	2023 Score	Change since 2020
Quantities and Sites		**28**	**-5**
Quantities of Nuclear Materials		50	-13
Sites and Transportation		25	0
Material Production/Elimination Trends		0	0
Security and Control Measures		**27**	**0**
On-Site Physical Protection		40	0
Control and Accounting Procedures		20	0
Insider Threat Prevention		18	0
Physical Security During Transport		50	0
Response Capabilities		63	0
Cybersecurity		0	0
Security Culture		0	0
Global Norms		**0**	**0**
International Legal Commitments		0	0
Voluntary Commitments		0	0
International Assurances		0	0
Nuclear Security INFCIRCs		0	0
Domestic Commitments and Capacity		**5**	**+5**
UNSCR 1540 Implementation		20	+20
Domestic Nuclear Security Legislation		0	0
Independent Regulatory Agency		0	0
Risk Environment		**28**	**-3**
Political Stability		30	0
Effective Governance		13	0
Pervasiveness of Corruption		0	0
Illicit Activities by Non-State Actors		70	-10

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

NORWAY

2023 RANK	2023 SCORE	CHANGE SINCE 2020
6	83	-1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**89**	**0**
● Quantities of Nuclear Materials	100	0
● Sites and Transportation	88	0
● Material Production/Elimination Trends	75	0
Security and Control Measures	**61**	**+4**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	80	0
● Insider Threat Prevention	36	+18
● Physical Security During Transport	50	0
● Response Capabilities	63	0
● Cybersecurity	38	0
● Security Culture	50	0
Global Norms	**87**	**-3**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	50	-11
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**86**	**-12**
● Political Stability	80	-20
● Effective Governance	100	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	65	-25

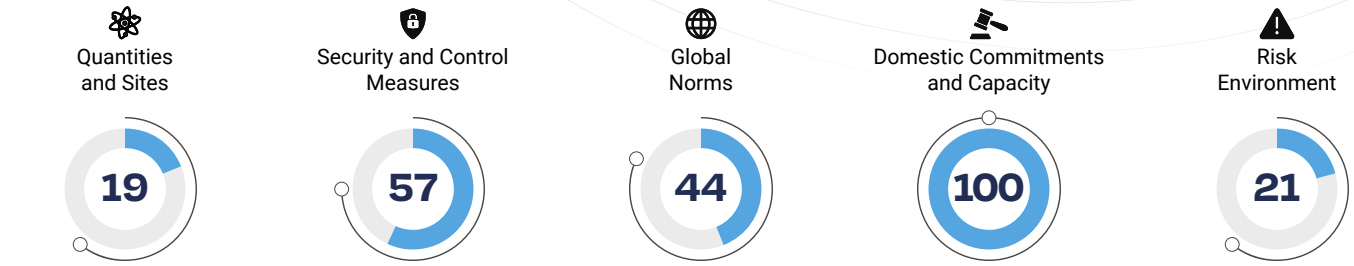
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

PAKISTAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
19	49	+3



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**19**	**0**
Quantities of Nuclear Materials	38	0
Sites and Transportation	13	0
Material Production/Elimination Trends	0	0
Security and Control Measures	**57**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	40	0
Insider Threat Prevention	27	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	38	0
Security Culture	50	0
Global Norms	**44**	**-1**
International Legal Commitments	43	0
Voluntary Commitments	83	0
International Assurances	28	-5
Nuclear Security INFCIRCs	20	0
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**21**	**+8**
Political Stability	25	+10
Effective Governance	13	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	20	+20

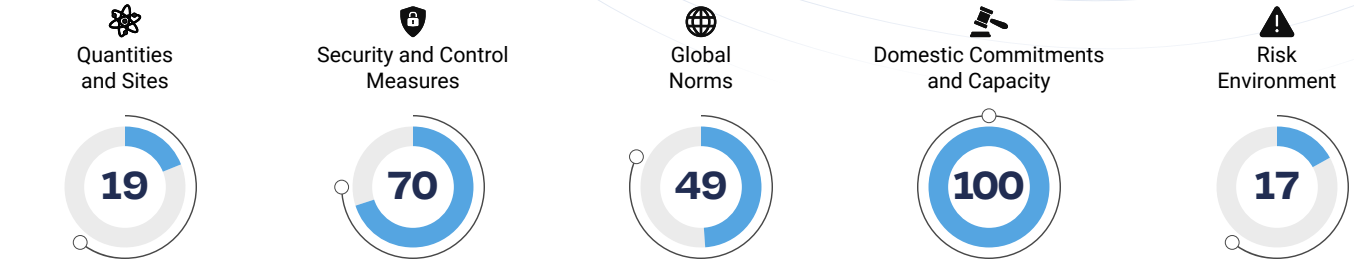
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

RUSSIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
18	53	-3



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**19**	**0**
● Quantities of Nuclear Materials	0	0
● Sites and Transportation	0	0
● Material Production/Elimination Trends	75	0
Security and Control Measures	**70**	**0**
● On-Site Physical Protection	60	0
● Control and Accounting Procedures	90	0
● Insider Threat Prevention	64	0
● Physical Security During Transport	100	0
● Response Capabilities	88	0
● Cybersecurity	50	0
● Security Culture	50	0
Global Norms	**49**	**-6**
● International Legal Commitments	71	0
● Voluntary Commitments	83	-17
● International Assurances	28	-5
● Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**17**	**-9**
● Political Stability	20	-25
● Effective Governance	13	-12
● Pervasiveness of Corruption	0	0
● Illicit Activities by Non-State Actors	35	0

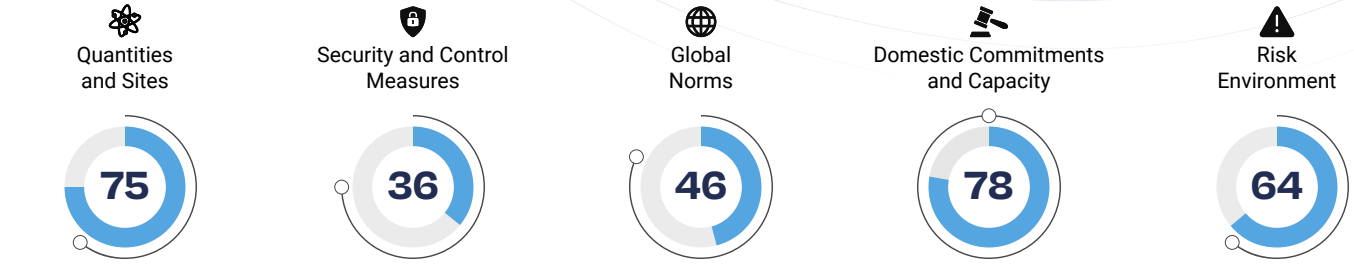
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

SOUTH AFRICA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
16	58	+1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**75**	**0**
● Quantities of Nuclear Materials	50	0
● Sites and Transportation	100	0
● Material Production/Elimination Trends	75	0
Security and Control Measures	**36**	**0**
● On-Site Physical Protection	40	0
● Control and Accounting Procedures	70	0
● Insider Threat Prevention	36	0
● Physical Security During Transport	0	0
● Response Capabilities	75	0
● Cybersecurity	25	0
● Security Culture	0	0
Global Norms	**46**	**-5**
● International Legal Commitments	86	0
● Voluntary Commitments	33	-17
● International Assurances	39	-5
● Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**78**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	33	0
● Independent Regulatory Agency	100	0
Risk Environment	**64**	**+8**
● Political Stability	65	0
● Effective Governance	63	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	80	+35

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

SWITZERLAND

2023 RANK	2023 SCORE	CHANGE SINCE 2020
2	91	-1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**94**	**-6**
● Quantities of Nuclear Materials	100	0
● Sites and Transportation	100	0
● Material Production/Elimination Trends	75	-25
Security and Control Measures	**87**	**+1**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	80	+10
● Insider Threat Prevention	91	0
● Physical Security During Transport	100	0
● Response Capabilities	88	0
● Cybersecurity	100	0
● Security Culture	25	0
Global Norms	**87**	**+3**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	67	0
● Nuclear Security INFCIRCs	80	+20
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**86**	**-5**
● Political Stability	85	0
● Effective Governance	88	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	70	-20

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

UNITED KINGDOM

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=9	77	0

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**14**	**0**
● Quantities of Nuclear Materials	13	0
● Sites and Transportation	25	0
● Material Production/Elimination Trends	0	0
Security and Control Measures	**96**	**0**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	90	-10
● Insider Threat Prevention	100	0
● Physical Security During Transport	100	0
● Response Capabilities	100	0
● Cybersecurity	100	+12
● Security Culture	75	0
Global Norms	**94**	**+1**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	78	+6
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**74**	**-2**
● Political Stability	80	+10
● Effective Governance	88	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	30	-15

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

THEFT: SECURE MATERIALS

UNITED STATES

2023 RANK	2023 SCORE	CHANGE SINCE 2020
11	74	-2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Quantities and Sites	**25**	**0**
● Quantities of Nuclear Materials	0	0
● Sites and Transportation	0	0
● Material Production/Elimination Trends	100	0
Security and Control Measures	**89**	**0**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	90	0
● Insider Threat Prevention	91	0
● Physical Security During Transport	100	0
● Response Capabilities	88	0
● Cybersecurity	88	0
● Security Culture	50	0
Global Norms	**93**	**-1**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	72	-6
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**58**	**-5**
● Political Stability	60	-15
● Effective Governance	75	0
● Pervasiveness of Corruption	75	0
● Illicit Activities by Non-State Actors	20	-5

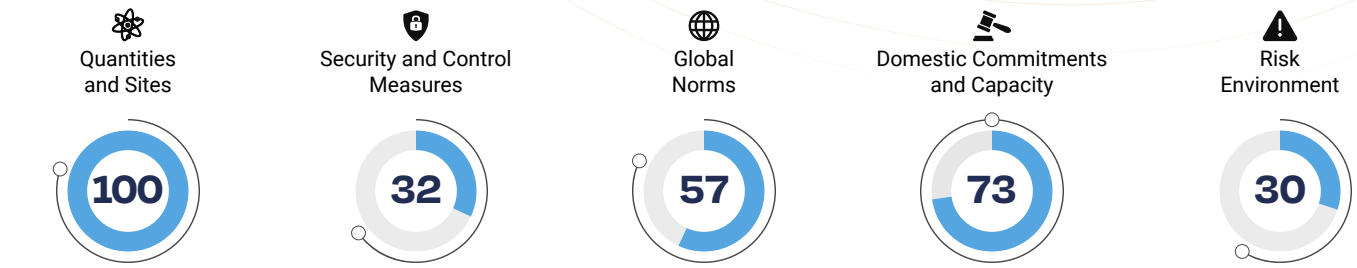
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

ALGERIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=42	50	+10



	2023 Score	Change since 2020
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**32**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	63	0
Insider Threat Prevention	0	0
Response Capabilities	38	0
Cybersecurity	0	0
Security Culture	0	0
Global Norms	**57**	**0**
International Legal Commitments	86	0
Voluntary Commitments	83	0
International Assurances	25	0
Nuclear Security INFCIRCs	20	0
Domestic Commitments and Capacity	**73**	**+37**
UNSCR 1540 Implementation	80	-20
Domestic Nuclear Security Legislation	33	0
Independent Regulatory Agency	100	+100
Risk Environment	**30**	**+9**
Political Stability	25	-5
Effective Governance	0	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	70	+40

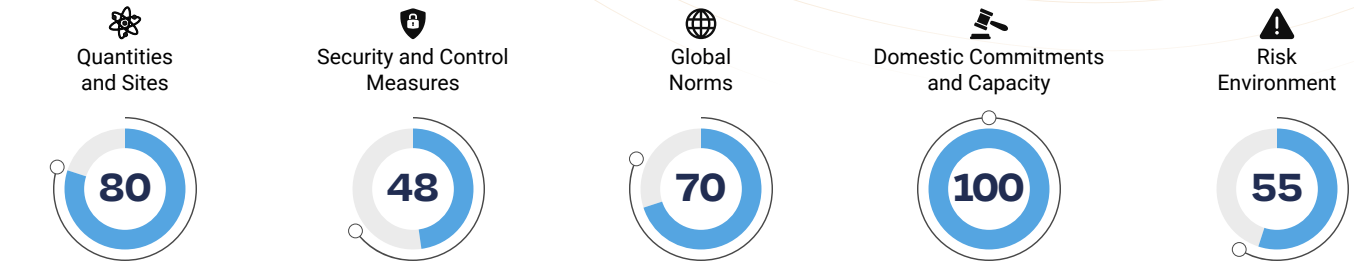
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

ARGENTINA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=28	68	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**48**	**+3**
● On-Site Physical Protection	60	0
● Control and Accounting Procedures	88	0
● Insider Threat Prevention	18	0
● Response Capabilities	50	0
● Cybersecurity	0	0
● Security Culture	100	+25
Global Norms	**70**	**-2**
● International Legal Commitments	100	0
● Voluntary Commitments	67	0
● International Assurances	42	-8
● Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**55**	**0**
● Political Stability	55	0
● Effective Governance	50	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	65	0

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

ARMENIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=24	72	+1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**63**	**0**
● On-Site Physical Protection	60	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	75	0
● Cybersecurity	25	0
● Security Culture	50	0
Global Norms	**77**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	67	0
● International Assurances	42	0
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**95**	**-5**
● UNSCR 1540 Implementation	80	-20
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**46**	**+11**
● Political Stability	35	-5
● Effective Governance	25	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	75	+50

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

AUSTRALIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
2	93	-2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**89**	**0**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	100	0
● Cybersecurity	88	0
● Security Culture	75	0
Global Norms	**94**	**-6**
● International Legal Commitments	100	0
● Voluntary Commitments	83	-17
● International Assurances	92	-8
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**89**	**-1**
● Political Stability	85	0
● Effective Governance	100	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	70	-5

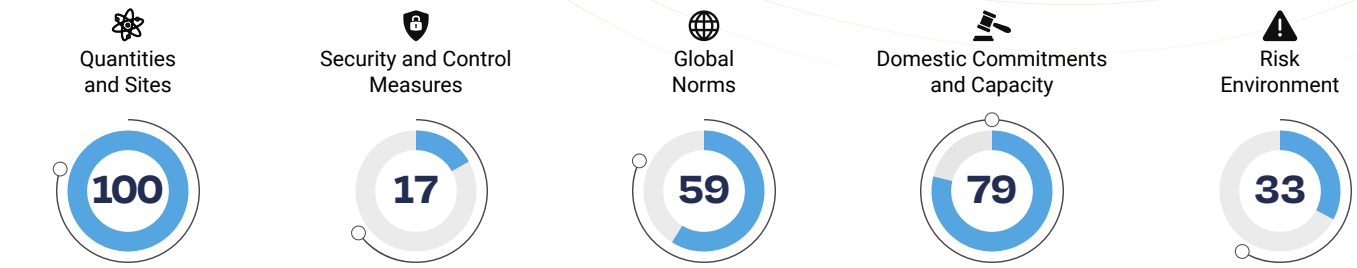
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

BANGLADESH

2023 RANK	2023 SCORE	CHANGE SINCE 2020
44	48	+3



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**17**	**0**
On-Site Physical Protection	40	0
Control and Accounting Procedures	13	0
Insider Threat Prevention	0	0
Response Capabilities	25	0
Cybersecurity	0	0
Security Culture	25	0
Global Norms	**59**	**+8**
International Legal Commitments	100	0
Voluntary Commitments	67	+17
International Assurances	42	+17
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**79**	**-5**
UNSCR 1540 Implementation	60	-20
Domestic Nuclear Security Legislation	67	0
Independent Regulatory Agency	100	0
Risk Environment	**33**	**+15**
Political Stability	45	-5
Effective Governance	13	0
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	75	+65

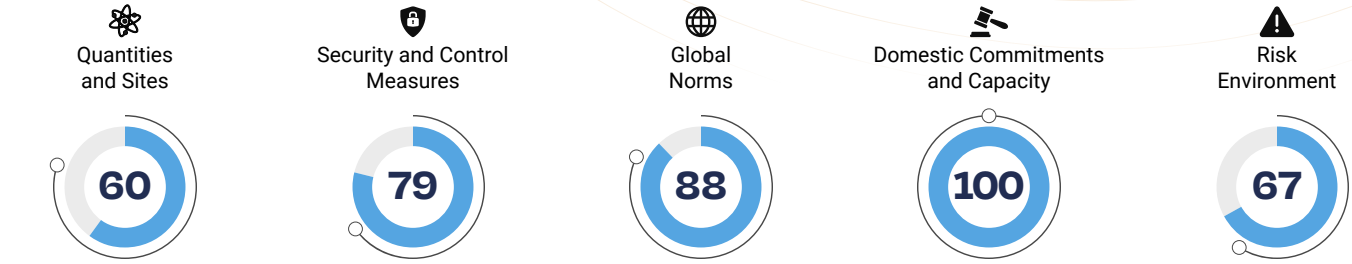
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

BELGIUM

2023 RANK	2023 SCORE	CHANGE SINCE 2020
12	83	+4



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**79**	**+6**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	64	0
Response Capabilities	100	0
Cybersecurity	50	0
Security Culture	100	+50
Global Norms	**88**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	83	0
Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**67**	**-4**
Political Stability	65	-10
Effective Governance	63	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	65	-5

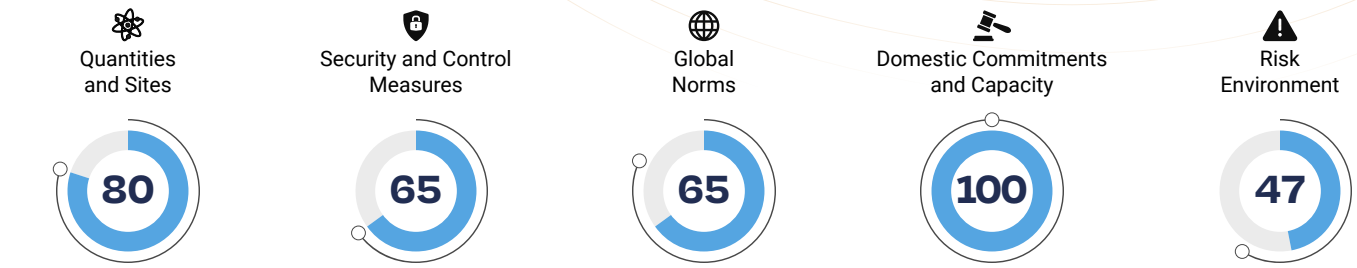
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

BRAZIL

2023 RANK	2023 SCORE	CHANGE SINCE 2020
27	70	+11



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**65**	**+3**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	36	0
● Response Capabilities	88	0
● Cybersecurity	25	0
● Security Culture	75	+25
Global Norms	**65**	**+7**
● International Legal Commitments	100	+14
● Voluntary Commitments	83	0
● International Assurances	50	+8
● Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**100**	**+42**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	+100
Risk Environment	**47**	**-3**
● Political Stability	60	0
● Effective Governance	38	-12
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	65	0

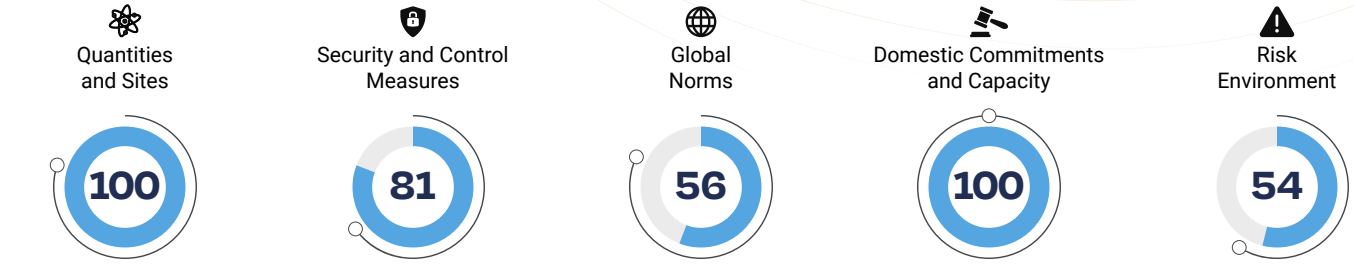
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

BULGARIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
21	76	-1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**81**	**0**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	82	0
● Response Capabilities	100	0
● Cybersecurity	50	0
● Security Culture	50	0
Global Norms	**56**	**-2**
● International Legal Commitments	86	0
● Voluntary Commitments	83	0
● International Assurances	33	-9
● Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**54**	**-3**
● Political Stability	65	-10
● Effective Governance	38	0
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	90	0

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

CANADA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
3	91	-1

● High Score ● Medium Score ● Low Score ○ Index Median

	0 20 40 60 80 100	2023 Score	Change since 2020
Number of Sites		**60**	**0**
● Number of Sites		60	0
Security and Control Measures		**91**	**0**
● On-Site Physical Protection		100	0
● Control and Accounting Procedures		100	0
● Insider Threat Prevention		82	0
● Response Capabilities		100	0
● Cybersecurity		88	0
● Security Culture		75	0
Global Norms		**96**	**0**
● International Legal Commitments		100	0
● Voluntary Commitments		100	0
● International Assurances		83	0
● Nuclear Security INFCIRCs		100	0
Domestic Commitments and Capacity		**100**	**0**
● UNSCR 1540 Implementation		100	0
● Domestic Nuclear Security Legislation		100	0
● Independent Regulatory Agency		100	0
Risk Environment		**85**	**-1**
● Political Stability		85	-5
● Effective Governance		100	0
● Pervasiveness of Corruption		100	0
● Illicit Activities by Non-State Actors		55	0

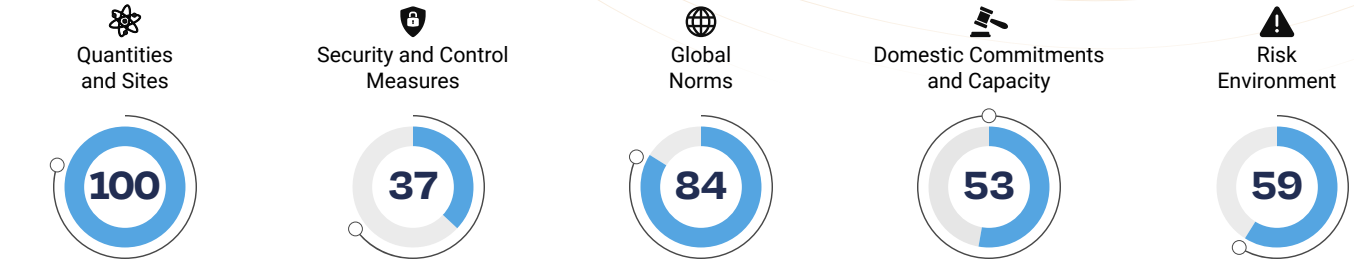
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

CHILE

2023 RANK	2023 SCORE	CHANGE SINCE 2020
35	59	-1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**37**	**+2**
On-Site Physical Protection	40	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	27	+9
Response Capabilities	63	0
Cybersecurity	0	0
Security Culture	25	0
Global Norms	**84**	**0**
International Legal Commitments	100	0
Voluntary Commitments	67	0
International Assurances	67	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**53**	**-5**
UNSCR 1540 Implementation	80	-20
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	0	0
Risk Environment	**59**	**-4**
Political Stability	60	-15
Effective Governance	75	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	25	0

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

CHINA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
22	75	+2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**20**	**-20**
Number of Sites	20	-20
Security and Control Measures	**79**	**0**
On-Site Physical Protection	100	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	45	0
Response Capabilities	100	0
Cybersecurity	63	0
Security Culture	75	0
Global Norms	**77**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	42	-8
Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**49**	**+5**
Political Stability	50	-5
Effective Governance	25	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	70	+25

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

CZECH REPUBLIC

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=10	84	+1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**79**	**+3**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	64	0
● Response Capabilities	100	0
● Cybersecurity	63	0
● Security Culture	75	+25
Global Norms	**93**	**+8**
● International Legal Commitments	100	0
● Voluntary Commitments	100	+17
● International Assurances	75	+17
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**62**	**-10**
● Political Stability	65	-10
● Effective Governance	63	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	70	-30

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

EGYPT

2023 RANK	2023 SCORE	CHANGE SINCE 2020
45	37	-2

● High Score ● Medium Score ● Low Score ○ Index Median

	0 20 40 60 80 100	2023 Score	Change since 2020
Number of Sites		**100**	**0**
● Number of Sites		100	0
Security and Control Measures		**19**	**0**
● On-Site Physical Protection		40	0
● Control and Accounting Procedures		25	0
● Insider Threat Prevention		0	0
● Response Capabilities		25	0
● Cybersecurity		0	0
● Security Culture		25	0
Global Norms		**25**	**-4**
● International Legal Commitments		29	0
● Voluntary Commitments		50	0
● International Assurances		17	-16
● Nuclear Security INFCIRCs		0	0
Domestic Commitments and Capacity		**62**	**-5**
● UNSCR 1540 Implementation		80	-20
● Domestic Nuclear Security Legislation		0	0
● Independent Regulatory Agency		100	0
Risk Environment		**31**	**-2**
● Political Stability		55	0
● Effective Governance		25	0
● Pervasiveness of Corruption		25	0
● Illicit Activities by Non-State Actors		20	-5

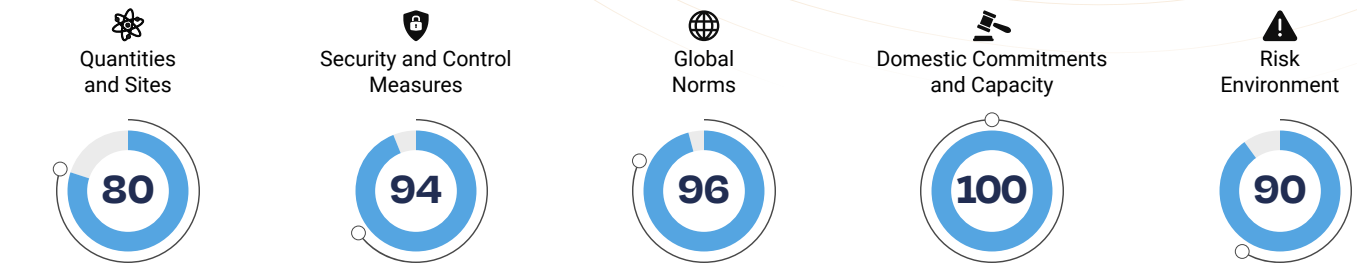
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

FINLAND

2023 RANK	2023 SCORE	CHANGE SINCE 2020
1	94	+4



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**94**	**+6**
● On-Site Physical Protection	100	+20
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	91	+9
● Response Capabilities	88	0
● Cybersecurity	88	0
● Security Culture	100	0
Global Norms	**96**	**+7**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	83	+25
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**90**	**+5**
● Political Stability	80	+10
● Effective Governance	100	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	80	+10

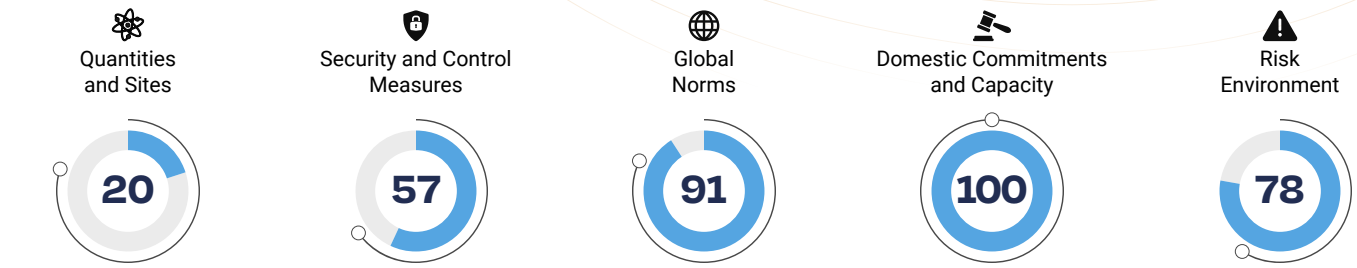
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

FRANCE

2023 RANK	2023 SCORE	CHANGE SINCE 2020
20	77	+1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**20**	**0**
Number of Sites	20	0
Security and Control Measures	**57**	**-2**
On-Site Physical Protection	60	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	36	-9
Response Capabilities	63	0
Cybersecurity	63	0
Security Culture	25	0
Global Norms	**91**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	67	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**78**	**+5**
Political Stability	75	-5
Effective Governance	100	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	60	+25

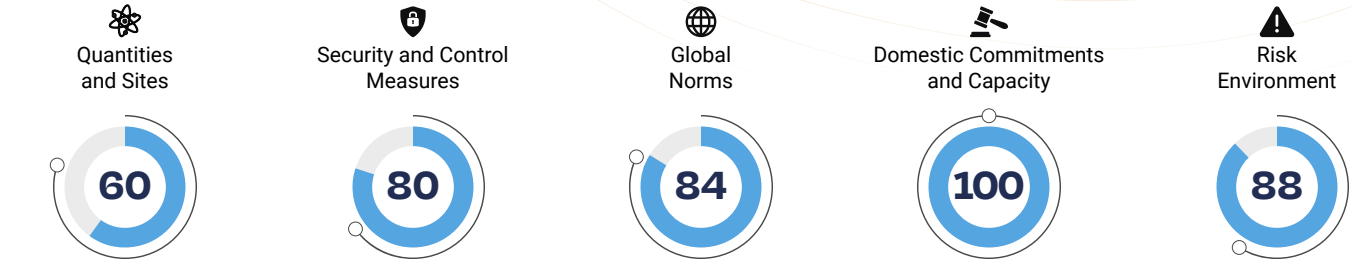
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

GERMANY

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=6	86	+1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**60**	**+20**
● Number of Sites	60	+20
Security and Control Measures	**80**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	100	0
● Cybersecurity	75	0
● Security Culture	50	0
Global Norms	**84**	**-3**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	42	-8
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**88**	**+4**
● Political Stability	75	-5
● Effective Governance	100	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	75	+20

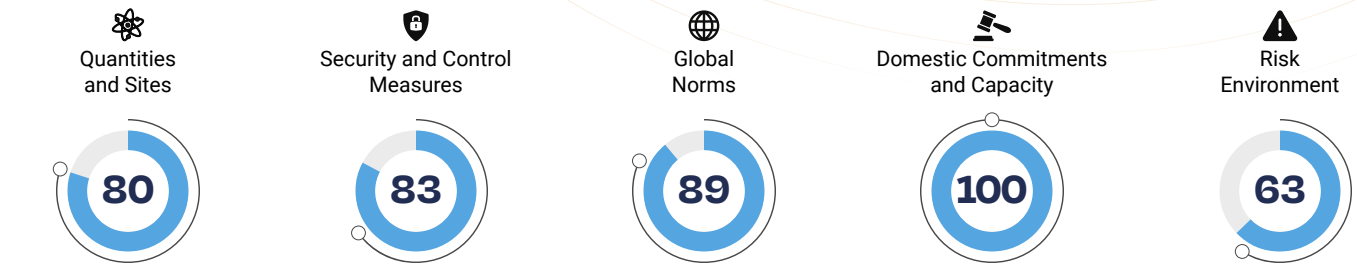
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

HUNGARY

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=10	84	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**83**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	100	0
● Cybersecurity	75	0
● Security Culture	75	0
Global Norms	**89**	**+5**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	58	+16
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**63**	**-3**
● Political Stability	65	-10
● Effective Governance	50	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	85	-5

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

INDIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=40	52	0

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**52**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	38	0
Insider Threat Prevention	27	0
Response Capabilities	63	0
Cybersecurity	75	0
Security Culture	50	0
Global Norms	**77**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	42	-8
Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**36**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	33	0
Independent Regulatory Agency	0	0
Risk Environment	**41**	**+5**
Political Stability	60	-5
Effective Governance	50	+12
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	30	+15

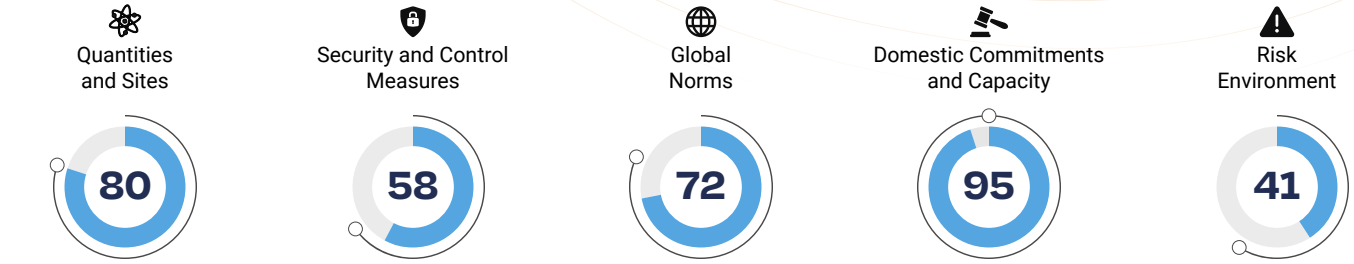
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

INDONESIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=28	68	-1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**58**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	88	0
● Insider Threat Prevention	55	0
● Response Capabilities	88	0
● Cybersecurity	13	0
● Security Culture	25	0
Global Norms	**72**	**-4**
● International Legal Commitments	100	0
● Voluntary Commitments	67	-16
● International Assurances	50	0
● Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**95**	**-5**
● UNSCR 1540 Implementation	80	-20
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**41**	**+2**
● Political Stability	60	+5
● Effective Governance	38	0
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	40	0

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

IRAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
46	23	+2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**23**	**0**
On-Site Physical Protection	40	0
Control and Accounting Procedures	13	0
Insider Threat Prevention	18	0
Response Capabilities	63	0
Cybersecurity	0	0
Security Culture	0	0
Global Norms	**16**	**-2**
International Legal Commitments	0	0
Voluntary Commitments	50	0
International Assurances	17	-8
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**25**	**+10**
UNSCR 1540 Implementation	100	+40
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	0	0
Risk Environment	**16**	**+4**
Political Stability	20	0
Effective Governance	13	0
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	30	+15

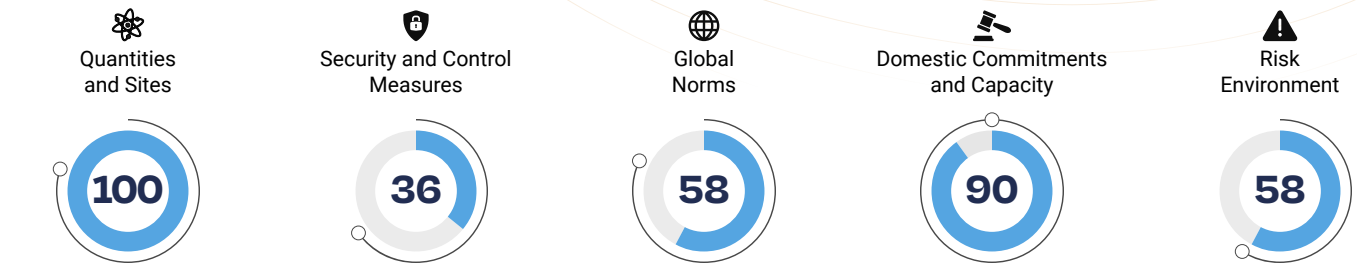
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

ISRAEL

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=32	61	-2



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**36**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	0	0
● Insider Threat Prevention	27	0
● Response Capabilities	75	0
● Cybersecurity	13	0
● Security Culture	0	0
Global Norms	**58**	**0**
● International Legal Commitments	71	0
● Voluntary Commitments	67	0
● International Assurances	8	0
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**90**	**-10**
● UNSCR 1540 Implementation	60	-40
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**58**	**+1**
● Political Stability	50	-5
● Effective Governance	88	0
● Pervasiveness of Corruption	75	0
● Illicit Activities by Non-State Actors	20	+10

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

JAPAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
9	85	+1

● High Score ● Medium Score ● Low Score ○ Index Median

	0 20 40 60 80 100	2023 Score	Change since 2020
Number of Sites		**20**	**0**
Number of Sites		20	0
Security and Control Measures		**77**	**+4**
On-Site Physical Protection		80	0
Control and Accounting Procedures		88	0
Insider Threat Prevention		82	+9
Response Capabilities		100	0
Cybersecurity		63	+13
Security Culture		50	0
Global Norms		**100**	**0**
International Legal Commitments		100	0
Voluntary Commitments		100	0
International Assurances		100	0
Nuclear Security INFCIRCs		100	0
Domestic Commitments and Capacity		**100**	**0**
UNSCR 1540 Implementation		100	0
Domestic Nuclear Security Legislation		100	0
Independent Regulatory Agency		100	0
Risk Environment		**79**	**+1**
Political Stability		90	+10
Effective Governance		88	0
Pervasiveness of Corruption		75	0
Illicit Activities by Non-State Actors		65	-5

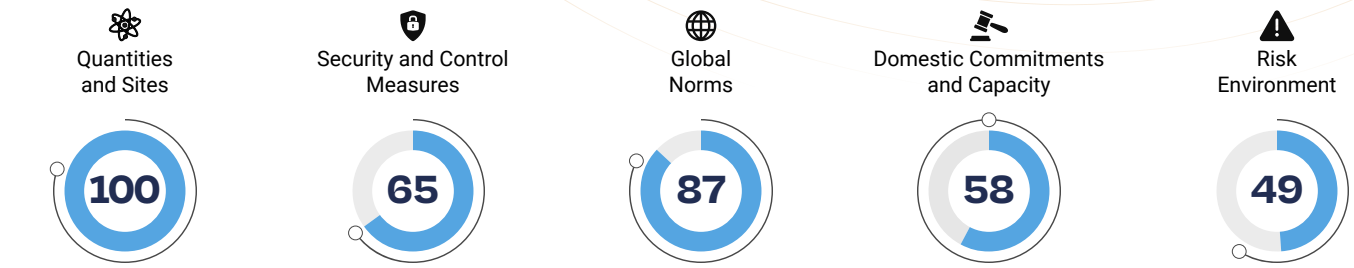
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

JORDAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
30	67	+2



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**65**	**0**
● On-Site Physical Protection	60	0
● Control and Accounting Procedures	88	0
● Insider Threat Prevention	36	0
● Response Capabilities	38	0
● Cybersecurity	100	0
● Security Culture	75	0
Global Norms	**87**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	50	0
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**58**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	0	0
Risk Environment	**49**	**+9**
● Political Stability	30	-15
● Effective Governance	50	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	65	+50

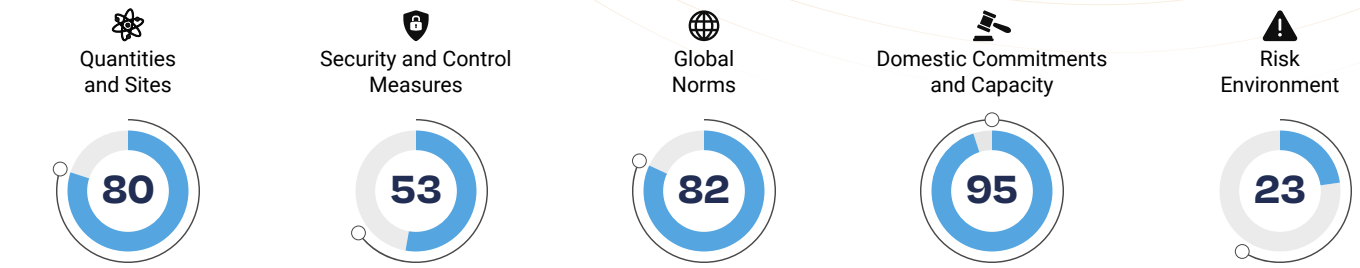
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

KAZAKHSTAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
31	65	-4



	2023 Score	Change since 2020
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**53**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	88	0
Insider Threat Prevention	36	0
Response Capabilities	63	0
Cybersecurity	25	0
Security Culture	25	0
Global Norms	**82**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	33	-9
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**95**	**-5**
UNSCR 1540 Implementation	80	-20
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**23**	**-10**
Political Stability	30	-25
Effective Governance	25	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	10	-15

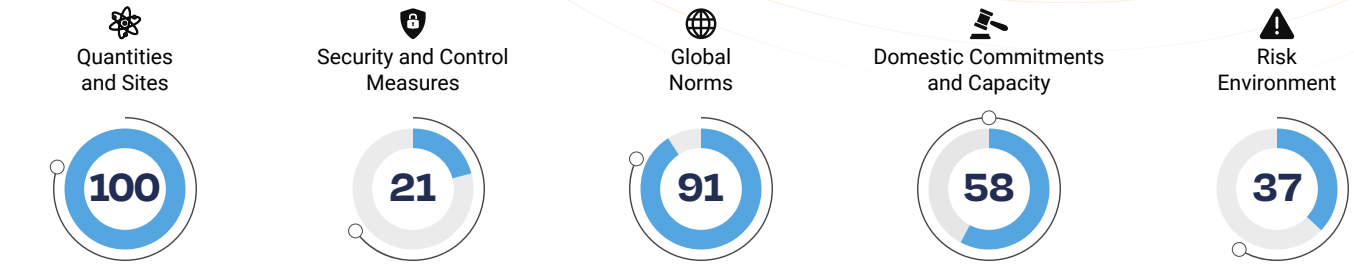
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

MEXICO

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=40	52	-1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**21**	**0**
● On-Site Physical Protection	40	0
● Control and Accounting Procedures	25	0
● Insider Threat Prevention	9	0
● Response Capabilities	25	0
● Cybersecurity	0	0
● Security Culture	25	0
Global Norms	**91**	**-2**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	67	-8
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**58**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	0	0
Risk Environment	**37**	**+1**
● Political Stability	55	+5
● Effective Governance	38	0
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	30	0

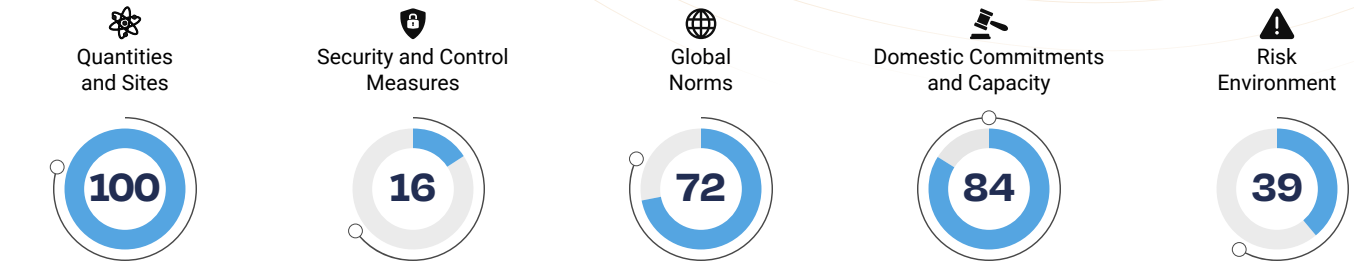
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

MOROCCO

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=38	53	-3



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**16**	**0**
On-Site Physical Protection	40	0
Control and Accounting Procedures	25	0
Insider Threat Prevention	0	0
Response Capabilities	25	0
Cybersecurity	0	0
Security Culture	0	0
Global Norms	**72**	**-4**
International Legal Commitments	100	0
Voluntary Commitments	67	-16
International Assurances	25	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**84**	**-5**
UNSCR 1540 Implementation	80	-20
Domestic Nuclear Security Legislation	67	0
Independent Regulatory Agency	100	0
Risk Environment	**39**	**-5**
Political Stability	45	0
Effective Governance	25	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	60	-20

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

NETHERLANDS

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=6	86	-1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**77**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	63	0
● Cybersecurity	88	0
● Security Culture	50	0
Global Norms	**91**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	67	0
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**82**	**-2**
● Political Stability	75	-5
● Effective Governance	88	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	65	-5

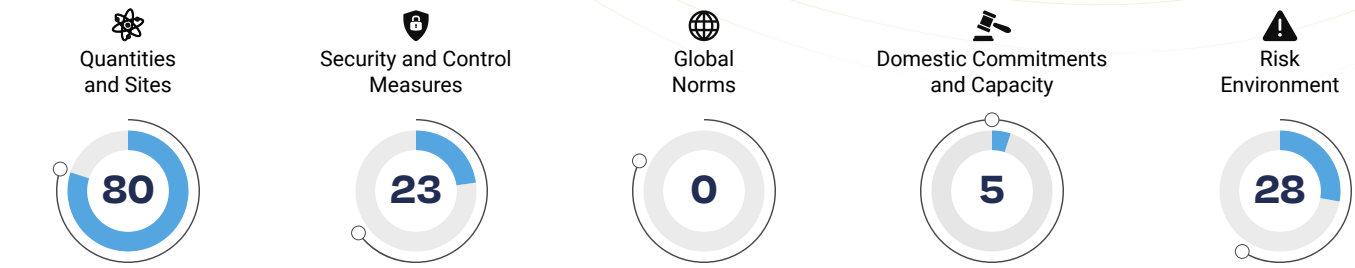
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

NORTH KOREA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
47	17	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**23**	**0**
On-Site Physical Protection	40	0
Control and Accounting Procedures	13	0
Insider Threat Prevention	18	0
Response Capabilities	63	0
Cybersecurity	0	0
Security Culture	0	0
Global Norms	**0**	**0**
International Legal Commitments	0	0
Voluntary Commitments	0	0
International Assurances	0	0
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**5**	**+5**
UNSCR 1540 Implementation	20	+20
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	0	0
Risk Environment	**28**	**-3**
Political Stability	30	0
Effective Governance	13	0
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	70	-10

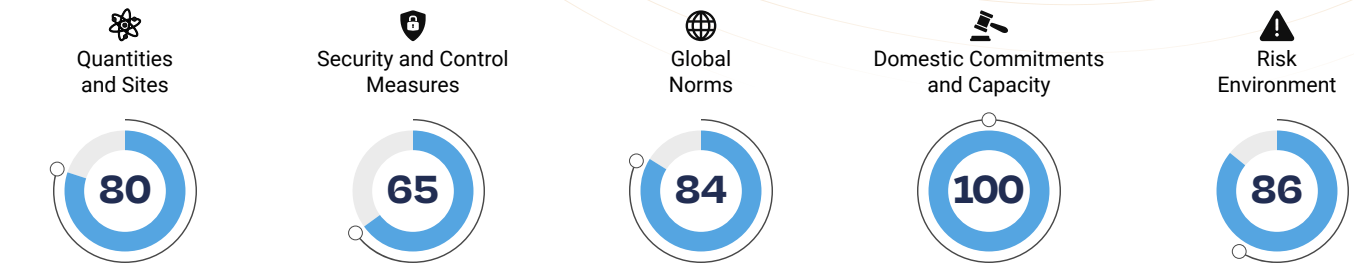
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

NORWAY

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=13	82	-2



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**65**	**+4**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	36	+18
● Response Capabilities	63	0
● Cybersecurity	38	0
● Security Culture	50	0
Global Norms	**84**	**-5**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	42	-16
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**86**	**-12**
● Political Stability	80	-20
● Effective Governance	100	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	65	-25

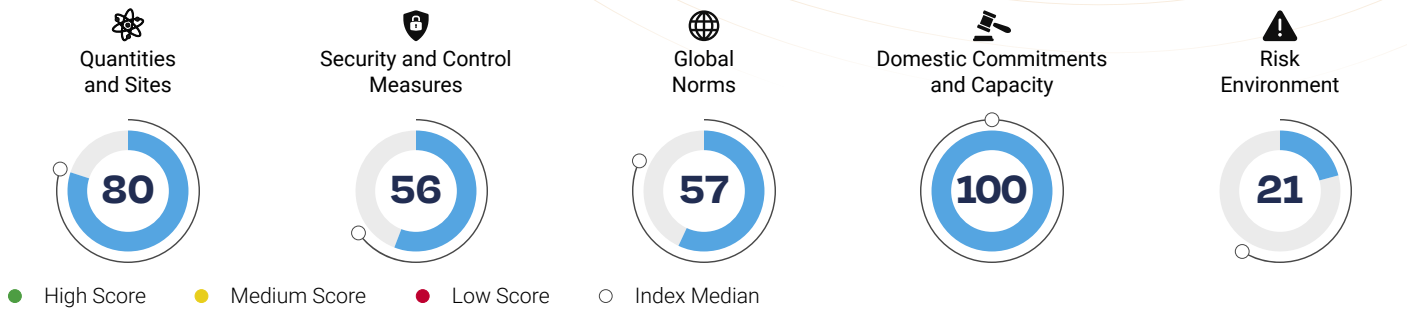
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

PAKISTAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=32	61	+4



	2023 Score	Change since 2020
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**56**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	27	0
Response Capabilities	100	0
Cybersecurity	38	0
Security Culture	50	0
Global Norms	**57**	**-2**
International Legal Commitments	71	0
Voluntary Commitments	83	0
International Assurances	42	-8
Nuclear Security INFCIRCs	20	0
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**21**	**+8**
Political Stability	25	+10
Effective Governance	13	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	20	+20

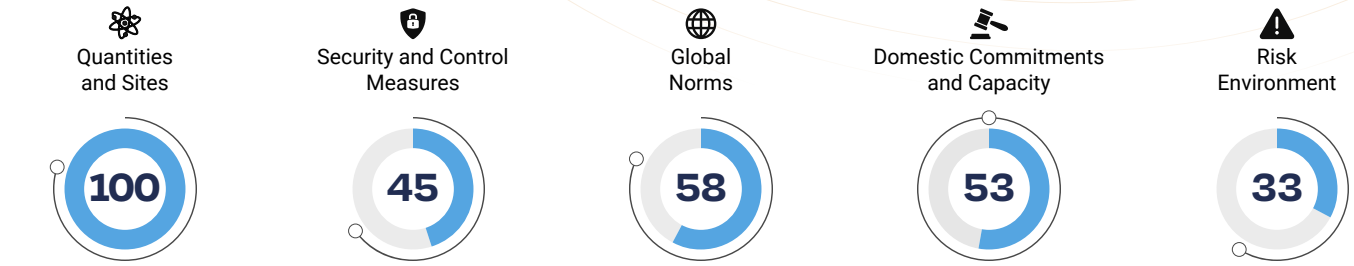
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

PERU

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=42	50	-2



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**45**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	88	0
Insider Threat Prevention	18	0
Response Capabilities	63	0
Cybersecurity	0	0
Security Culture	25	0
Global Norms	**58**	**+3**
International Legal Commitments	100	0
Voluntary Commitments	50	0
International Assurances	50	+8
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**53**	**-5**
UNSCR 1540 Implementation	80	-20
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	0	0
Risk Environment	**33**	**-7**
Political Stability	40	-25
Effective Governance	38	-12
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	30	+10

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

POLAND

2023 RANK	2023 SCORE	CHANGE SINCE 2020
18	79	+2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**65**	**0**
● On-Site Physical Protection	100	0
● Control and Accounting Procedures	88	0
● Insider Threat Prevention	55	0
● Response Capabilities	75	0
● Cybersecurity	38	0
● Security Culture	25	0
Global Norms	**85**	**-5**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	58	-17
● Nuclear Security INFCIRCs	80	0
Domestic Commitments and Capacity	**100**	**+11**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	+33
● Independent Regulatory Agency	100	0
Risk Environment	**63**	**+2**
● Political Stability	70	+5
● Effective Governance	50	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	80	0

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

ROMANIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=6	86	+1

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**88**	**+6**
● On-Site Physical Protection	80	+20
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	91	+9
● Response Capabilities	100	0
● Cybersecurity	100	0
● Security Culture	50	0
Global Norms	**90**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	83	0
● International Assurances	75	0
● Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**65**	**-3**
● Political Stability	70	-10
● Effective Governance	50	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	90	0

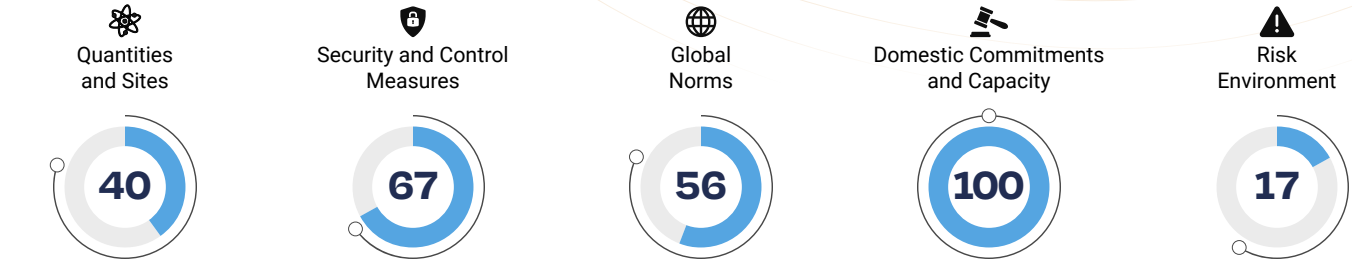
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

RUSSIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=32	61	-2



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**40**	**+20**
Number of Sites	40	+20
Security and Control Measures	**67**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	64	0
Response Capabilities	88	0
Cybersecurity	50	0
Security Culture	50	0
Global Norms	**56**	**-6**
International Legal Commitments	100	0
Voluntary Commitments	83	-17
International Assurances	17	-8
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**17**	**-9**
Political Stability	20	-25
Effective Governance	13	-12
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	35	0

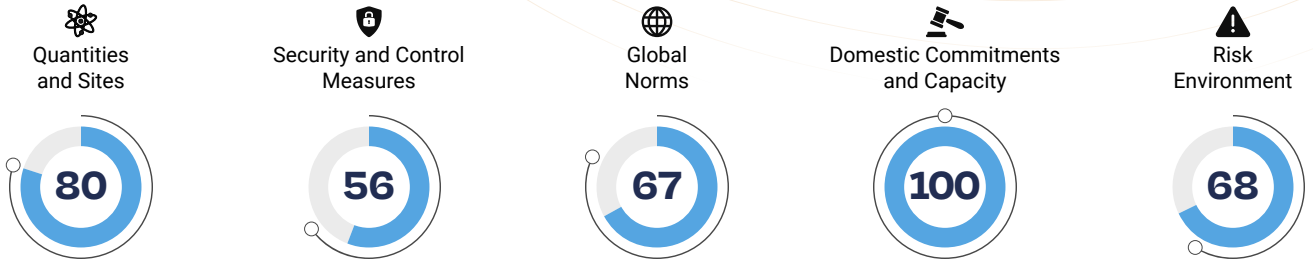
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

SLOVAK REPUBLIC

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=24	72	-1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**56**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	55	0
● Response Capabilities	50	0
● Cybersecurity	38	0
● Security Culture	0	0
Global Norms	**67**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	83	0
● International Assurances	58	0
● Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**68**	**-3**
● Political Stability	65	-5
● Effective Governance	75	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	80	-10

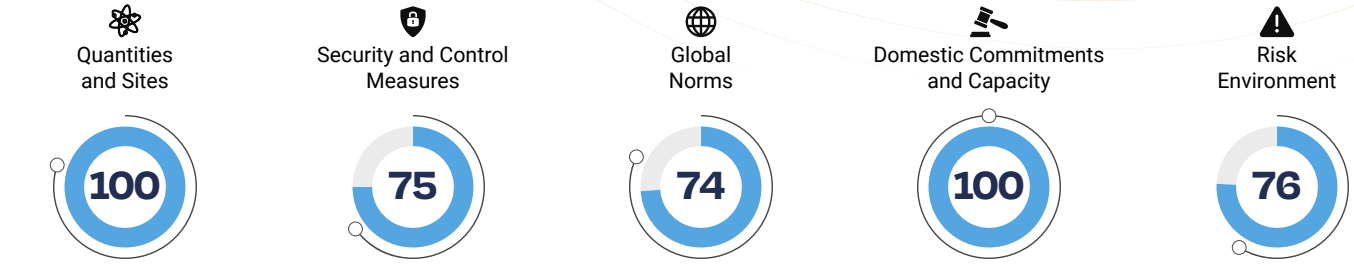
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

SLOVENIA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=13	82	+1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**75**	**+3**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	64	0
● Response Capabilities	88	0
● Cybersecurity	50	0
● Security Culture	75	+25
Global Norms	**74**	**+3**
● International Legal Commitments	100	0
● Voluntary Commitments	67	0
● International Assurances	58	0
● Nuclear Security INFCIRCs	60	+20
Domestic Commitments and Capacity	**100**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	0
● Independent Regulatory Agency	100	0
Risk Environment	**76**	**-4**
● Political Stability	70	-5
● Effective Governance	75	0
● Pervasiveness of Corruption	75	0
● Illicit Activities by Non-State Actors	85	-10

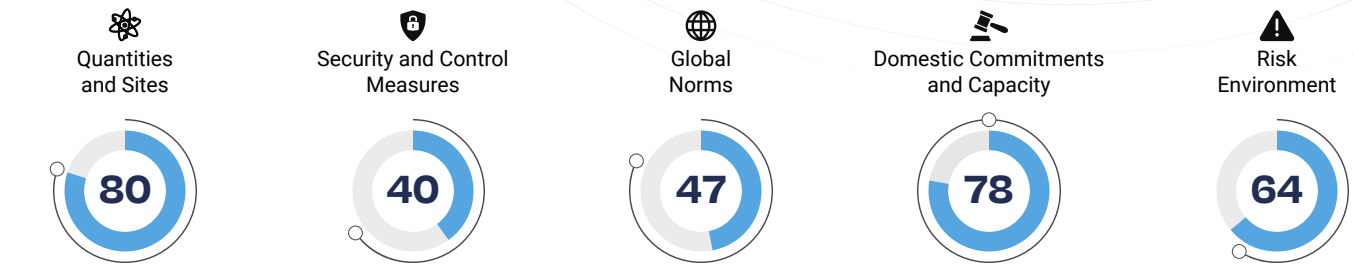
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

SOUTH AFRICA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
36	57	0



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**40**	**0**
● On-Site Physical Protection	40	0
● Control and Accounting Procedures	75	0
● Insider Threat Prevention	27	0
● Response Capabilities	75	0
● Cybersecurity	25	0
● Security Culture	0	0
Global Norms	**47**	**-6**
● International Legal Commitments	86	0
● Voluntary Commitments	33	-17
● International Assurances	42	-8
● Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**78**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	33	0
● Independent Regulatory Agency	100	0
Risk Environment	**64**	**+8**
● Political Stability	65	0
● Effective Governance	63	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	80	+35

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

SOUTH KOREA

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=15	81	+3

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**67**	**+2**
On-Site Physical Protection	80	0
Control and Accounting Procedures	75	+12
Insider Threat Prevention	27	0
Response Capabilities	88	0
Cybersecurity	100	0
Security Culture	25	0
Global Norms	**91**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	67	0
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**76**	**0**
Political Stability	60	+10
Effective Governance	88	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	80	-10

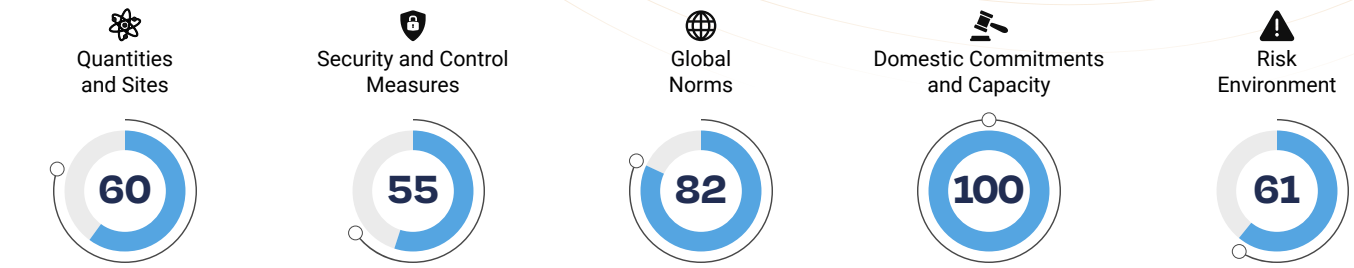
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

SPAIN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
23	73	-2



	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**55**	**0**
On-Site Physical Protection	40	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	27	0
Response Capabilities	88	0
Cybersecurity	50	0
Security Culture	75	0
Global Norms	**82**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	33	-9
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**61**	**-7**
Political Stability	60	-15
Effective Governance	75	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	60	-10

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

SWEDEN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=15	81	0

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**65**	**+4**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	+12
Insider Threat Prevention	36	0
Response Capabilities	100	+12
Cybersecurity	50	0
Security Culture	25	0
Global Norms	**91**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	67	-8
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**89**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	67	0
Independent Regulatory Agency	100	0
Risk Environment	**93**	**-1**
Political Stability	90	0
Effective Governance	100	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	80	-5

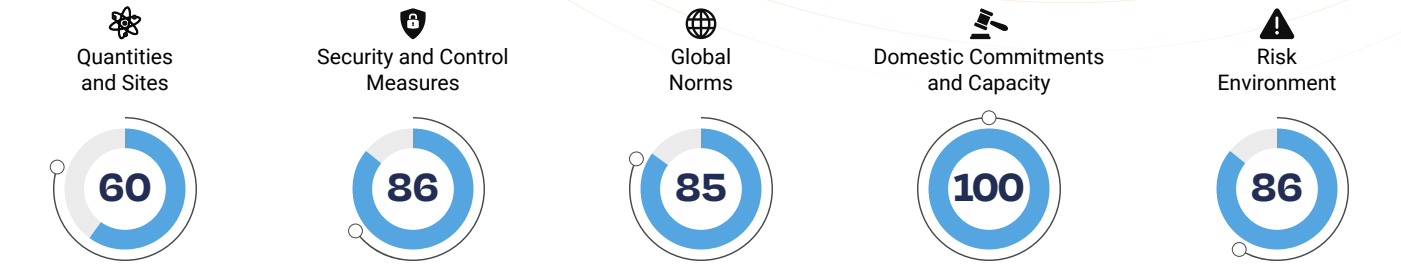
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

SWITZERLAND

2023 RANK	2023 SCORE	CHANGE SINCE 2020
5	88	+1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**86**	**+2**
On-Site Physical Protection	100	0
Control and Accounting Procedures	100	+12
Insider Threat Prevention	82	0
Response Capabilities	88	0
Cybersecurity	100	0
Security Culture	25	0
Global Norms	**85**	**+3**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	58	0
Nuclear Security INFCIRCs	80	+20
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**86**	**-5**
Political Stability	85	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	70	-20

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

TAIWAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=38	53	0

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**70**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	82	0
Response Capabilities	63	0
Cybersecurity	100	0
Security Culture	25	0
Global Norms	**22**	**0**
International Legal Commitments	29	0
Voluntary Commitments	17	0
International Assurances	33	0
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**42**	**0**
UNSCR 1540 Implementation	80	0
Domestic Nuclear Security Legislation	67	0
Independent Regulatory Agency	0	0
Risk Environment	**75**	**-1**
Political Stability	70	+5
Effective Governance	75	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	80	-10

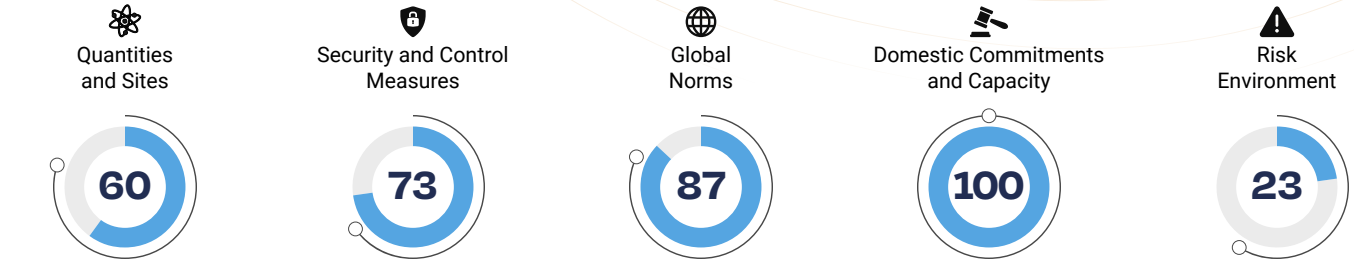
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

UKRAINE

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=24	72	+7



	2023 Score	Change since 2020
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**73**	**+5**
On-Site Physical Protection	60	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	36	-9
Response Capabilities	100	0
Cybersecurity	88	+38
Security Culture	100	0
Global Norms	**87**	**-3**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	67	-8
Nuclear Security INFCIRCs	80	0
Domestic Commitments and Capacity	**100**	**+22**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+67
Independent Regulatory Agency	100	0
Risk Environment	**23**	**+5**
Political Stability	0	-10
Effective Governance	25	0
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	65	+30

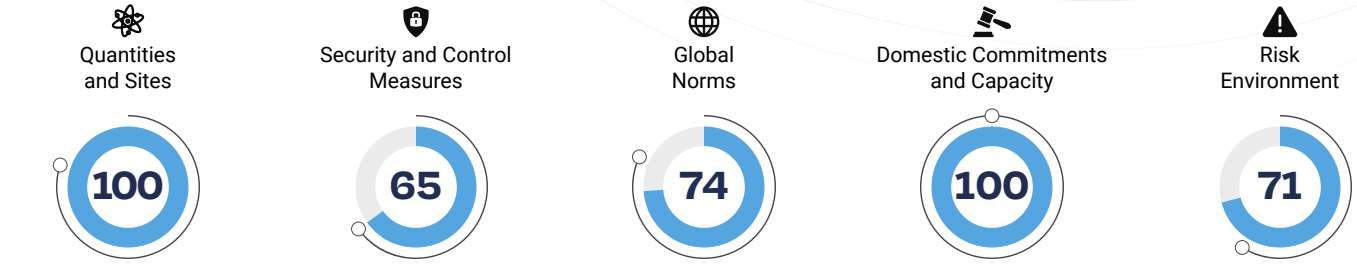
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

UNITED ARAB EMIRATES

2023 RANK	2023 SCORE	CHANGE SINCE 2020
19	78	-1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**65**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	55	0
Response Capabilities	88	0
Cybersecurity	50	0
Security Culture	75	0
Global Norms	**74**	**-6**
International Legal Commitments	100	0
Voluntary Commitments	67	-16
International Assurances	58	-9
Nuclear Security INFCIRCs	60	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**71**	**+3**
Political Stability	80	+5
Effective Governance	50	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	80	+10

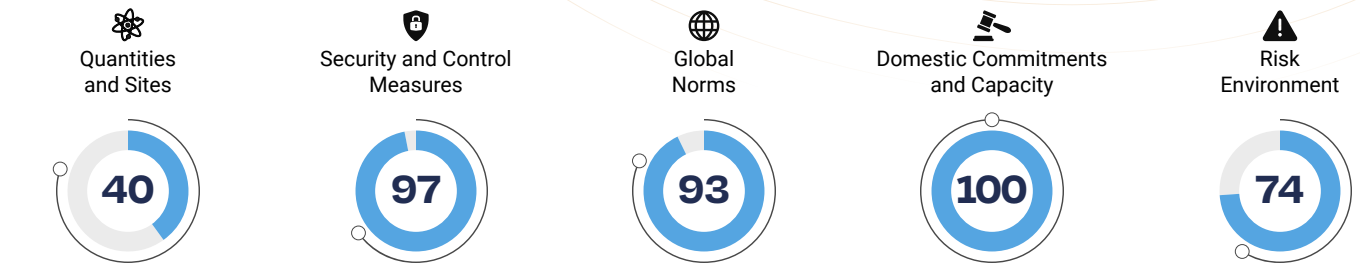
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

UNITED KINGDOM

2023 RANK	2023 SCORE	CHANGE SINCE 2020
4	90	+1



● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**40**	**0**
Number of Sites	40	0
Security and Control Measures	**97**	**+2**
On-Site Physical Protection	100	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	100	0
Response Capabilities	100	0
Cybersecurity	100	+12
Security Culture	75	0
Global Norms	**93**	**+2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	75	+8
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**74**	**-2**
Political Stability	80	+10
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	30	-15

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

UNITED STATES

2023 RANK	2023 SCORE	CHANGE SINCE 2020
=15	81	-2

● High Score ● Medium Score ● Low Score ○ Index Median

	2023 Score	Change since 2020
Number of Sites	**0**	**0**
Number of Sites	0	0
Security and Control Measures	**88**	**0**
On-Site Physical Protection	100	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	91	0
Response Capabilities	88	0
Cybersecurity	88	0
Security Culture	50	0
Global Norms	**91**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	67	-8
Nuclear Security INFCIRCs	100	0
Domestic Commitments and Capacity	**100**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	0
Independent Regulatory Agency	100	0
Risk Environment	**58**	**-5**
Political Stability	60	-15
Effective Governance	75	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	20	-5

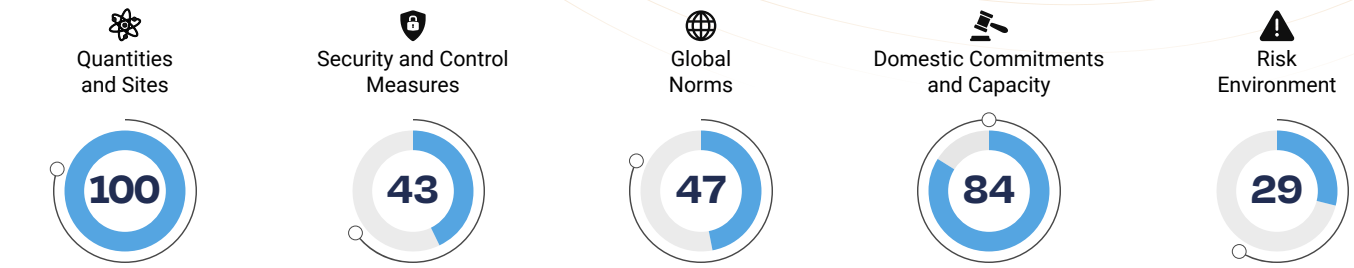
= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

SABOTAGE: PROTECT FACILITIES

UZBEKISTAN

2023 RANK	2023 SCORE	CHANGE SINCE 2020
37	54	-1



	2023 Score	Change since 2020
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**43**	**+2**
On-Site Physical Protection	60	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	18	0
Response Capabilities	75	0
Cybersecurity	13	+13
Security Culture	25	0
Global Norms	**47**	**-2**
International Legal Commitments	71	0
Voluntary Commitments	67	0
International Assurances	33	-9
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**84**	**-5**
UNSCR 1540 Implementation	80	-20
Domestic Nuclear Security Legislation	67	0
Independent Regulatory Agency	100	0
Risk Environment	**29**	**-3**
Political Stability	40	-10
Effective Governance	0	-13
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	75	+10

= denotes tie in rank

Scores are normalized (0–100, where 100 = most favorable nuclear security conditions)

RADIOLOGICAL

		Afghanistan
NATIONAL MEASURES		
Regulatory Oversight	Does the country/area maintain a radioactive source regulatory oversight body?	Yes
Security Measures	Are there regulations that require security measures to be in place to protect radioactive sources?	No or no data available
State Registry	Does the state maintain a registry of radioactive sources?	No or no data available
Inspection Authority	Does the state have authority to inspect facilities with radioactive sources?	No or no data available
Export Licenses	Are there licensing requirements for exporting International Atomic Energy Agency (IAEA) Category 1 sources?	No or no data available
GLOBAL NORMS		
IAEA Code of Conduct Status	Has the state made a political commitment and notified the IAEA of their intent to abide by the Code of Conduct on the Safety and Security of Radioactive Sources?	Yes
	Has the state notified the IAEA of their intent to abide by the Guidance on the Import and Export of Radioactive Sources?	Yes
	Has the state nominated a Point of Contact to facilitate imports and exports of radioactive source material?	Yes
	Has the state made available their responses to the IAEA Importing and Exporting States Questionnaire?	Yes
	Has the state notified the IAEA of their commitment to implement the Guidance on the Management of Disused Radioactive Sources?	No
International Participation	Does the state participate in the Global Initiative to Combat Nuclear Terrorism (GICNT)?	Yes
	Did the state send an official delegation to the 2022 International Conference on Safety and Security of Radioactive Sources?	No
International Conventions	Is the country/area a state party to the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)?	Yes
	Is the country/area a state party to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management?	No
	Is the country/area a state party to the Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency?	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES		
Intent	Has the state subscribed to IAEA Information Circular (INFCIRC) 910?	No
Implementation	Has the country/area publicly declared a regulatory requirement, policy, or commitment to implementing alternative technology to replace high-activity radioactive sources?	No
Capacity	What is the average percentage of businesses experiencing power outages each month?	Frequent power outages (80th–99th percentile)
	What percentage of the population over 25 holds a tertiary degree or higher?	Few people with degrees (0–19th percentile)
RISK ENVIRONMENT		
Political Stability	What is the risk of significant social unrest during the next two years?	High
	How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?	Not clear, established, or accepted
	Is there a risk that international disputes/tensions will negatively affect the polity during the next two years?	Very high
	Is this country/area presently subject to armed conflict, or is there at least a moderate risk of such conflict during the next two years?	Territorial conflict; opposition has effective control over a region or regions
	Are violent demonstrations or violent civil/labor unrest likely to occur during the next two years?	High
Effective Governance	How effective is the country/area's political system in formulating and executing policy?	Very low
	What is the quality of the country/area's bureaucracy and its ability to carry out government policy?	Very low
Pervasiveness of Corruption	How pervasive is corruption among public officials?	High
Illicit Activities by Non-State Actors	How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption to business operations?	Very high
	How likely is organized crime to be a problem for government and/or business?	Moderate
	How many firearms were seized during the interdiction of illicit weapons trafficking?	No data

RADIOLOGICAL

Albania	Algeria	Angola	Argentina
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No or no data available	No or no data available	No or no data available	No or no data available
Yes	No or no data available	Yes	Yes
Yes	No or no data available	Yes	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	Yes	Yes
Yes	No	Yes	Yes
No	No	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
No	Yes	No	Yes
Yes	No	No	Yes
Yes	Yes	No	Yes
No	No	No	No
No	No	No	No
40th–59th percentile	60th–79th percentile	60th–79th percentile	20th–39th percentile
20th–39th percentile	No data	Few people with degrees (0–19th percentile)	40th–59th percentile
High	Very high	Moderate	High
One of the three criteria is absent	Not clear, established, or accepted	Clear, established, and accepted	One of the three criteria is absent
High	High	Moderate	Low
No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
High	Moderate	Moderate	High
Low	Very low	Very low	Moderate
Low	Very low	Low	Moderate
High	High	Very high	Moderate
Low	Moderate	Low	Low
High	Moderate	Low	Moderate
Moderate	Moderate	Very high	Very high

RADIOLOGICAL

		Armenia	Australia	Austria
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	Yes
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	Yes	Yes	No or no data available
Export Licenses	Licensing requirements	Yes	Yes	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	No
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	Yes	Yes	No
International Participation	GICNT	Yes	Yes	Yes
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	Yes	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	Yes	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	60th–79th percentile	No data	Infrequent power outages (0–19th percentile)
	Tertiary degrees	40th–59th percentile	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Low	Low
	Transfers of power	One of the three criteria is absent	Very clear, established, and accepted	Very clear, established, and accepted
	International disputes	High	Low	High
	Armed conflict	Sporadic and incursive conflict	No armed conflict exists	No armed conflict exists
	Violent demonstrations	High	Low	Low
Effective Governance	Effectiveness of political system	Low	Very high	High
	Quality of bureaucracy	Low	Very high	High
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	Very low	Moderate
Illicit Activities by Non-State Actors	Terrorism	Moderate	Low	Low
	Organized crime	Moderate	Low	Very low
	Illicit arms flows	Low	Very high	No data

RADIOLOGICAL

Azerbaijan	Bahamas	Bahrain	Bangladesh
Yes	Yes	Yes	Yes
No or no data available	No or no data available	No or no data available	Yes
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	No or no data available	Yes
No or no data available	No or no data available	No or no data available	Yes
Yes	No	No	Yes
Yes	No	No	No
Yes	No	No	Yes
Yes	No	No	No
No	No	No	No
Yes	No	Yes	No
Yes	No	No	Yes
Yes	No	Yes	Yes
No	No	No	No
No	No	No	Yes
No	No	No	No
No	No	No	No
40th–59th percentile	40th–59th percentile	No data	Frequent power outages (80th–99th percentile)
40th–59th percentile	20th–39th percentile	40th–59th percentile	20th–39th percentile
Moderate	Low	Very high	High
Not clear, established, or accepted	Clear, established, and accepted	Two of the three criteria are absent	One of the three criteria is absent
High	Low	High	Moderate
Sporadic and incursive conflict	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Moderate	Low	High	High
Low	Moderate	Moderate	Very low
Low	Moderate	Moderate	Low
High	Very low	Moderate	Very high
Moderate	Very low	Moderate	Moderate
Moderate	Moderate	Very low	Moderate
Moderate	Moderate	No data	No data

RADIOLOGICAL

		Barbados	Belarus	Belgium
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	No or no data available	Yes	No or no data available
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	No or no data available	Yes	No or no data available
Export Licenses	Licensing requirements	No or no data available	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	No
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	Yes	No	No
International Participation	GICNT	No	Yes	Yes
	Radioactive Material Conference	No	Yes	No
International Conventions	ICSANT	No	Yes	Yes
	Joint Convention	No	Yes	Yes
	Convention on Assistance	No	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	Yes
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	40th–59th percentile	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)
	Tertiary degrees	Few people with degrees (0–19th percentile)	60th–79th percentile	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Very high	Moderate
	Transfers of power	Very clear, established, and accepted	Not clear, established, or accepted	Clear, established, and accepted
	International disputes	No threat	Very high	High
	Armed conflict	No armed conflict exists	Territorial conflict; opposition has effective control over a region or regions	No armed conflict exists
	Violent demonstrations	Low	High	Low
Effective Governance	Effectiveness of political system	High	Very low	High
	Quality of bureaucracy	Moderate	Very low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	High	Low
Illicit Activities by Non-State Actors	Terrorism	Very low	Low	Moderate
	Organized crime	Low	Moderate	Low
	Illicit arms flows	No data	Very high	Very high

RADIOLOGICAL

Belize	Benin	Bhutan	Bolivia
Yes	Yes	No or no data available	Yes
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	No or no data available	No or no data available
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	No	No	Yes
No	No	No	No
No	No	No	No
No	Yes	No	No
No	Yes	No	No
No	Yes	No	Yes
No	Yes	No	Yes
No	No	No	No
No	No	No	No
60th–79th percentile	Frequent power outages (80th–99th percentile)	20th–39th percentile	20th–39th percentile
20th–39th percentile	No data	20th–39th percentile	60th–79th percentile
Moderate	Moderate	Low	High
One of the three criteria is absent	One of the three criteria is absent	Clear, established, and accepted	One of the three criteria is absent
Moderate	Moderate	Moderate	Low
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Moderate	High	Very low	High
Moderate	Low	Moderate	Very low
Low	Low	Moderate	Low
Moderate	Moderate	Very low	High
Very low	Low	Very low	Low
Very high	Moderate	Low	High
No data	No data	No data	Low

RADIOLOGICAL

		Bosnia and Herzegovina	Botswana	Brazil
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	No or no data available
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	Yes	Yes	No or no data available
Export Licenses	Licensing requirements	Yes	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	Yes	Yes	No
International Participation	GICNT	Yes	No	No
	Radioactive Material Conference	No	No	Yes
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	Yes	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	40th–59th percentile	60th–79th percentile	40th–59th percentile
	Tertiary degrees	20th–39th percentile	No data	40th–59th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Very high	Low	Moderate
	Transfers of power	Two of the three criteria are absent	Clear, established, and accepted	Two of the three criteria are absent
	International disputes	Very high	Low	Low
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	No armed conflict exists
	Violent demonstrations	High	Very low	Moderate
Effective Governance	Effectiveness of political system	Low	Moderate	Low
	Quality of bureaucracy	Very low	Moderate	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	High	Low	High
Illicit Activities by Non-State Actors	Terrorism	Moderate	Very low	Very low
	Organized crime	High	Low	High
	Illicit arms flows	No data	Very low	Very high

RADIOLOGICAL

Brunei Darussalam	Bulgaria	Burkina Faso	Burundi
No or no data available	Yes	Yes	No or no data available
No or no data available	Yes	Yes	No or no data available
No or no data available	No or no data available	Yes	No or no data available
No or no data available	No or no data available	Yes	No or no data available
No or no data available	Yes	Yes	No or no data available
No	Yes	Yes	Yes
No	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	No	No
No	Yes	No	No
No	No	Yes	No
No	No	No	Yes
No	Yes	No	No
No	Yes	Yes	No
No	No	No	No
No	No	No	No
No data	20th–39th percentile	Frequent power outages (80th–99th percentile)	Frequent power outages (80th–99th percentile)
20th–39th percentile	60th–79th percentile	Few people with degrees (0–19th percentile)	Few people with degrees (0–19th percentile)
Very low	Moderate	High	High
Not clear, established, or accepted	Clear, established, and accepted	Not clear, established, or accepted	Not clear, established, or accepted
Low	High	Moderate	Moderate
No armed conflict exists	No armed conflict exists	Territorial conflict; opposition has effective control over a region or regions	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
Very low	Low	High	High
High	Moderate	Low	Very low
Moderate	Low	Very low	Low
Very low	High	Moderate	Very high
Very low	Low	Very high	High
Very low	High	High	High
No data	Very low	Moderate	Low

RADIOLOGICAL

		Cabo Verde	Cambodia	Cameroon
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	No or no data available	Yes	Yes
Security Measures	Security requirement	No or no data available	Yes	Yes
State Registry	Active registry	No or no data available	No or no data available	Yes
Inspection Authority	Inspection authority	No or no data available	No or no data available	Yes
Export Licenses	Licensing requirements	No or no data available	No or no data available	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	No	No	Yes
	Import Export Guidance	No	No	Yes
	Point of Contact	No	Yes	Yes
	Questionnaire	No	No	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	Yes	Yes	No
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	No	No	No
	Joint Convention	No	No	No
	Convention on Assistance	No	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	60th–79th percentile	40th–59th percentile	Frequent power outages (80th–99th percentile)
	Tertiary degrees	20th–39th percentile	No data	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Moderate	High
	Transfers of power	Clear, established, and accepted	Two of the three criteria are absent	Not clear, established, or accepted
	International disputes	No threat	High	High
	Armed conflict	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic and incursive conflict
	Violent demonstrations	Moderate	Moderate	Very high
Effective Governance	Effectiveness of political system	Moderate	Very low	Low
	Quality of bureaucracy	Moderate	Low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	Low	Very high	Very high
Illicit Activities by Non-State Actors	Terrorism	Very low	Low	High
	Organized crime	Moderate	High	High
	Illicit arms flows	Low	No data	Low

RADIOLOGICAL

Canada	Central African Republic	Chad	Chile
Yes	Yes	Yes	Yes
Yes	No or no data available	Yes	Yes
No or no data available	No or no data available	No or no data available	No or no data available
Yes	No or no data available	Yes	Yes
Yes	No or no data available	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	No	No	Yes
Yes	No	Yes	No
Yes	No	No	Yes
Yes	Yes	Yes	Yes
Yes	Yes	No	Yes
Yes	No	No	Yes
Yes	No	No	Yes
Yes	No	No	Yes
No	No	No	No
No data	Frequent power outages (80th–99th percentile)	60th–79th percentile	20th–39th percentile
Many people with degrees (80th–99th percentile)	No data	Few people with degrees (0–19th percentile)	60th–79th percentile
Low	High	High	High
Very clear, established, and accepted	Not clear, established, or accepted	Not clear, established, or accepted	Very clear, established, and accepted
Low	High	Moderate	Low
No armed conflict exists	Territorial conflict; opposition has effective control over a region or regions	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Low	Very high	Moderate	High
Very high	Very low	Very low	High
Very high	Very low	Very low	High
Very low	Very high	Very high	Low
Low	High	Very high	Low
Low	Very high	High	Low
Very high	Low	No data	Very high

RADIOLOGICAL

		China	Colombia	Comoros
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	No or no data available
Security Measures	Security requirement	Yes	Yes	No or no data available
State Registry	Active registry	No or no data available	Yes	No or no data available
Inspection Authority	Inspection authority	Yes	No or no data available	No or no data available
Export Licenses	Licensing requirements	Yes	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	No
	Import Export Guidance	Yes	Yes	No
	Point of Contact	Yes	Yes	No
	Questionnaire	No	Yes	No
	Disused Sources Guidance	No	No	No
International Participation	GICNT	Yes	No	No
	Radioactive Material Conference	Yes	Yes	No
International Conventions	ICSANT	Yes	No	Yes
	Joint Convention	Yes	No	No
	Convention on Assistance	Yes	Yes	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	Infrequent power outages (0–19th percentile)	20th–39th percentile	No data
	Tertiary degrees	40th–59th percentile	60th–79th percentile	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	High	No data
	Transfers of power	Not clear, established, or accepted	Very clear, established, and accepted	No data
	International disputes	High	Moderate	No data
	Armed conflict	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	No data
	Violent demonstrations	Moderate	High	No data
Effective Governance	Effectiveness of political system	Low	Moderate	No data
	Quality of bureaucracy	Low	Moderate	No data
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	Moderate	No data
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	High
	Organized crime	Moderate	High	High
	Illicit arms flows	No data	Very high	No data

RADIOLOGICAL

Congo (Dem. Rep. of)	Congo, Rep.	Costa Rica	Côte d'Ivoire
Yes	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	No or no data available	Yes
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	Yes
No	No	Yes	Yes
No	No	No	Yes
No	No	No	No
Yes	No	Yes	Yes
No	Yes	No	No
No	No	Yes	Yes
No	No	No	No
No	No	No	No
Frequent power outages (80th–99th percentile)	Frequent power outages (80th–99th percentile)	40th–59th percentile	60th–79th percentile
Few people with degrees (0–19th percentile)	No data	60th–79th percentile	No data
High	High	Moderate	High
Two of the three criteria are absent	Not clear, established, or accepted	Very clear, established, and accepted	Two of the three criteria are absent
High	Moderate	Moderate	Low
Territorial conflict; opposition has effective control over a region or regions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
High	Moderate	Low	Moderate
Very low	Very low	Moderate	Low
Very low	Low	Moderate	Low
Very high	Very high	Low	High
Moderate	Low	Very low	High
Very high	Moderate	Moderate	High
Low	No data	Very high	Low

RADIOLOGICAL

		Croatia	Cuba	Cyprus
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	Yes
State Registry	Active registry	Yes	No or no data available	No or no data available
Inspection Authority	Inspection authority	Yes	Yes	Yes
Export Licenses	Licensing requirements	Yes	No or no data available	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	No	Yes	No
International Participation	GICNT	Yes	No	Yes
	Radioactive Material Conference	Yes	Yes	Yes
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	Yes	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	Infrequent power outages (0–19th percentile)	No data	Infrequent power outages (0–19th percentile)
	Tertiary degrees	No data	20th–39th percentile	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Moderate	Moderate
	Transfers of power	Clear, established, and accepted	Two of the three criteria are absent	Clear, established, and accepted
	International disputes	Moderate	High	High
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
	Violent demonstrations	Low	Moderate	Low
Effective Governance	Effectiveness of political system	Moderate	Low	High
	Quality of bureaucracy	Moderate	Moderate	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	Moderate	Moderate
Illicit Activities by Non-State Actors	Terrorism	Very low	Very low	Low
	Organized crime	High	Low	Low
	Illicit arms flows	High	Very low	Very low

RADIOLOGICAL

Czech Republic	Denmark	Djibouti	Dominican Republic
Yes	Yes	No or no data available	Yes
Yes	No or no data available	No or no data available	Yes
Yes	No or no data available	No or no data available	Yes
Yes	No or no data available	No or no data available	Yes
Yes	No or no data available	No or no data available	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	No	No
Yes	Yes	Yes	No
Yes	Yes	No	No
No	No	No	Yes
Yes	Yes	Yes	Yes
Yes	Yes	No	No
Yes	Yes	No	No
Yes	Yes	No	No
No	Yes	No	No
20th–39th percentile	Infrequent power outages (0–19th percentile)	40th–59th percentile	Frequent power outages (80th–99th percentile)
40th–59th percentile	Many people with degrees (80th–99th percentile)	No data	40th–59th percentile
Low	Low	Moderate	Moderate
Clear, established, and accepted	Very clear, established, and accepted	Not clear, established, or accepted	One of the three criteria is absent
Very high	Moderate	High	Moderate
No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	No armed conflict exists
Low	Low	Moderate	Moderate
High	Very high	Very low	Moderate
Moderate	Very high	Low	Moderate
Moderate	Very low	High	Moderate
Very low	Very low	Moderate	Very low
Low	Very low	Moderate	Moderate
No data	Moderate	No data	Moderate

RADIOLOGICAL

		Ecuador	Egypt	El Salvador
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	Yes
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	Yes	Yes	Yes
Export Licenses	Licensing requirements	Yes	Yes	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	No	No	No
	Radioactive Material Conference	No	Yes	No
International Conventions	ICSANT	No	No	Yes
	Joint Convention	No	No	No
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	40th–59th percentile	20th–39th percentile	40th–59th percentile
	Tertiary degrees	20th–39th percentile	No data	20th–39th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Very high	Moderate	Moderate
	Transfers of power	One of the three criteria is absent	Two of the three criteria are absent	One of the three criteria is absent
	International disputes	Moderate	Moderate	Moderate
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
	Violent demonstrations	High	Low	Moderate
Effective Governance	Effectiveness of political system	Low	Low	Low
	Quality of bureaucracy	Low	Low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	High	High	High
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	Very low
	Organized crime	High	Low	High
	Illicit arms flows	High	No data	High

RADIOLOGICAL

Equatorial Guinea	Eritrea	Estonia	Eswatini
No or no data available	Yes	Yes	No or no data available
No or no data available	No or no data available	Yes	No or no data available
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	Yes	No or no data available
No	No	Yes	No
No	No	Yes	No
No	No	Yes	No
No	No	Yes	No
No	No	Yes	No
No	No	Yes	No
No	No	No	No
No	No	No	No
No	Yes	Yes	No
No	Yes	Yes	No
No	No	No	No
No	No	No	No
No data	20th–39th percentile	Infrequent power outages (0–19th percentile)	60th–79th percentile
No data	No data	60th–79th percentile	No data
Moderate	Low	Low	High
Not clear, established, or accepted	Not clear, established, or accepted	Clear, established, and accepted	Two of the three criteria are absent
High	Very high	Moderate	Moderate
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic and incursive conflict	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Moderate	Low	Low	High
Very low	Very low	Very high	Low
Very low	Low	High	Low
Very high	Very high	Low	High
Low	Moderate	Very low	Very low
High	Low	Low	Low
No data	No data	No data	Very low

RADIOLOGICAL

		Ethiopia	Fiji	Finland
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	No or no data available	Yes
Security Measures	Security requirement	Yes	No or no data available	Yes
State Registry	Active registry	Yes	No or no data available	No or no data available
Inspection Authority	Inspection authority	Yes	No or no data available	Yes
Export Licenses	Licensing requirements	Yes	No or no data available	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	No	Yes
	Import Export Guidance	Yes	No	Yes
	Point of Contact	Yes	No	Yes
	Questionnaire	Yes	No	Yes
	Disused Sources Guidance	No	No	Yes
International Participation	GICNT	No	No	Yes
	Radioactive Material Conference	Yes	No	Yes
International Conventions	ICSANT	No	Yes	Yes
	Joint Convention	No	No	Yes
	Convention on Assistance	No	No	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	Yes
Implementation	Alternative technology commitment	No	No	Yes
Capacity	Power outages	Frequent power outages (80th–99th percentile)	40th–59th percentile	Infrequent power outages (0–19th percentile)
	Tertiary degrees	No data	Few people with degrees (0–19th percentile)	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Very high	No data	Low
	Transfers of power	Not clear, established, or accepted	No data	Very clear, established, and accepted
	International disputes	High	No data	Moderate
	Armed conflict	Territorial conflict; opposition has effective control over a region or regions	No data	No armed conflict exists
	Violent demonstrations	Very high	No data	Low
Effective Governance	Effectiveness of political system	Low	No data	Very high
	Quality of bureaucracy	Low	No data	Very high
Pervasiveness of Corruption	Pervasiveness of corruption	High	No data	Very low
Illicit Activities by Non-State Actors	Terrorism	High	No data	Low
	Organized crime	Moderate	High	Very low
	Illicit arms flows	No data	No data	No data

RADIOLOGICAL

France	Gabon	Gambia, The	Georgia
Yes	Yes	No or no data available	Yes
No or no data available	Yes	No or no data available	Yes
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	Yes	No or no data available	Yes
No or no data available	Yes	No or no data available	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	No
Yes	No	No	Yes
Yes	No	No	Yes
Yes	No	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	No	No	No
Yes	No	No	No
Infrequent power outages (0–19th percentile)	60th–79th percentile	Frequent power outages (80th–99th percentile)	40th–59th percentile
Many people with degrees (80th–99th percentile)	No data	No data	60th–79th percentile
Moderate	High	Moderate	High
Very clear, established, and accepted	Not clear, established, or accepted	One of the three criteria is absent	One of the three criteria is absent
Moderate	Low	Moderate	Very high
No armed conflict exists	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
Low	High	Moderate	Moderate
Very high	Low	Low	Moderate
Very high	Moderate	Very low	Moderate
Low	High	Moderate	Low
Moderate	Very low	Moderate	Low
Low	Moderate	Moderate	Low
High	No data	No data	Moderate

RADIOLOGICAL

		Germany	Ghana	Greece
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	Yes
State Registry	Active registry	Yes	Yes	Yes
Inspection Authority	Inspection authority	Yes	Yes	Yes
Export Licenses	Licensing requirements	Yes	Yes	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	No	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	No	Yes
	Disused Sources Guidance	Yes	No	No
International Participation	GICNT	Yes	No	Yes
	Radioactive Material Conference	Yes	Yes	Yes
International Conventions	ICSANT	Yes	No	No
	Joint Convention	Yes	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	No	No
Implementation	Alternative technology commitment	Yes	No	No
Capacity	Power outages	Infrequent power outages (0–19th percentile)	Frequent power outages (80th–99th percentile)	20th–39th percentile
	Tertiary degrees	60th–79th percentile	No data	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	Moderate	Moderate
	Transfers of power	Very clear, established, and accepted	Clear, established, and accepted	Very clear, established, and accepted
	International disputes	High	Low	High
	Armed conflict	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
	Violent demonstrations	Low	Low	Moderate
Effective Governance	Effectiveness of political system	Very high	Moderate	Moderate
	Quality of bureaucracy	Very high	Low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	Moderate	High
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	Moderate
	Organized crime	Low	Moderate	Moderate
	Illicit arms flows	No data	Very low	Very high

RADIOLOGICAL

Guatemala	Guinea	Guinea-Bissau	Guyana
Yes	No or no data available	No or no data available	Yes
Yes	No or no data available	No or no data available	No or no data available
Yes	No or no data available	No or no data available	No or no data available
Yes	No or no data available	No or no data available	No or no data available
Yes	No or no data available	No or no data available	No or no data available
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
No	No	No	No
No	No	No	No
No	No	No	No
Yes	No	Yes	No
No	No	No	No
Yes	No	No	No
No	No	No	No
No	No	No	No
40th–59th percentile	60th–79th percentile	60th–79th percentile	Frequent power outages (80th–99th percentile)
Few people with degrees (0–19th percentile)	Few people with degrees (0–19th percentile)	No data	No data
High	Very high	No data	Moderate
One of the three criteria is absent	Not clear, established, or accepted	No data	Two of the three criteria are absent
Low	High	No data	High
Sporadic and incursive conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No data	No armed conflict exists
High	Very high	No data	Low
Very low	Very low	No data	Low
Very low	Very low	No data	Low
Very high	High	No data	High
Low	Moderate	No data	Very low
Very high	High	Moderate	Moderate
High	Very low	No data	Low

RADIOLOGICAL

		Haiti	Honduras	Hungary
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	No or no data available	Yes	Yes
State Registry	Active registry	No or no data available	Yes	Yes
Inspection Authority	Inspection authority	No or no data available	Yes	Yes
Export Licenses	Licensing requirements	No or no data available	Yes	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	No	Yes	Yes
	Disused Sources Guidance	Yes	No	Yes
International Participation	GICNT	No	No	Yes
	Radioactive Material Conference	No	No	Yes
International Conventions	ICSANT	No	No	Yes
	Joint Convention	No	No	Yes
	Convention on Assistance	No	No	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	Yes
Implementation	Alternative technology commitment	No	No	Yes
Capacity	Power outages	No data	60th–79th percentile	20th–39th percentile
	Tertiary degrees	No data	20th–39th percentile	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	High	Very high	Low
	Transfers of power	Not clear, established, or accepted	Two of the three criteria are absent	Clear, established, and accepted
	International disputes	Moderate	Moderate	Very high
	Armed conflict	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
	Violent demonstrations	Very high	High	Low
Effective Governance	Effectiveness of political system	Very low	Very low	Moderate
	Quality of bureaucracy	Very low	Low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Very high	High	Moderate
Illicit Activities by Non-State Actors	Terrorism	Low	Very low	Low
	Organized crime	Very high	High	Moderate
	Illicit arms flows	No data	High	Moderate

RADIOLOGICAL

Iceland	India	Indonesia	Iran
Yes	Yes	Yes	Yes
No or no data available	Yes	Yes	No or no data available
No or no data available	Yes	Yes	No or no data available
No or no data available	Yes	Yes	No or no data available
No or no data available	Yes	Yes	No or no data available
Yes	Yes	Yes	No
Yes	Yes	Yes	No
Yes	Yes	Yes	No
Yes	Yes	No	No
No	Yes	No	No
Yes	Yes	No	No
No	Yes	Yes	Yes
No	Yes	Yes	No
Yes	No	Yes	No
Yes	Yes	Yes	Yes
No	No	No	No
No	No	No	No
No data	Frequent power outages (80th–99th percentile)	20th–39th percentile	No data
Many people with degrees (80th–99th percentile)	40th–59th percentile	40th–59th percentile	40th–59th percentile
Low	Moderate	Moderate	Very high
Very clear, established, and accepted	Very clear, established, and accepted	Clear, established, and accepted	Two of the three criteria are absent
Moderate	Moderate	Moderate	Very high
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
Very low	Moderate	Moderate	High
Very high	Moderate	Moderate	Very low
High	Moderate	Low	Low
Low	High	High	Very high
Very low	Moderate	Low	High
Low	Moderate	Moderate	Moderate
No data	No data	No data	No data

RADIOLOGICAL

		Iraq	Ireland	Israel
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	No or no data available	Yes	No or no data available
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	No or no data available	Yes	No or no data available
Export Licenses	Licensing requirements	No or no data available	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	No
	Disused Sources Guidance	Yes	Yes	No
International Participation	GICNT	Yes	Yes	Yes
	Radioactive Material Conference	Yes	Yes	No
International Conventions	ICSANT	Yes	No	No
	Joint Convention	No	Yes	No
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	Yes
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	Frequent power outages (80th–99th percentile)	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)
	Tertiary degrees	No data	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Very high	Low	Moderate
	Transfers of power	Two of the three criteria are absent	Very clear, established, and accepted	Clear, established, and accepted
	International disputes	Very high	Moderate	Very high
	Armed conflict	Sporadic and incursive conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
	Violent demonstrations	Very high	Low	Moderate
Effective Governance	Effectiveness of political system	Very low	High	High
	Quality of bureaucracy	Very low	High	Very high
Pervasiveness of Corruption	Pervasiveness of corruption	Very high	Low	Low
Illicit Activities by Non-State Actors	Terrorism	Very high	Low	Moderate
	Organized crime	Very high	Moderate	Low
	Illicit arms flows	No data	Low	No data

RADIOLOGICAL

Italy	Jamaica	Japan	Jordan
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No or no data available	Yes	No or no data available	No or no data available
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	No
Yes	Yes	Yes	Yes
No	No	Yes	No
No	No	No	No
Yes	No	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	No	Yes	Yes
Yes	No	Yes	Yes
Yes	No	No	No
No	No	No	No
Infrequent power outages (0–19th percentile)	60th–79th percentile	No data	Infrequent power outages (0–19th percentile)
60th–79th percentile	20th–39th percentile	Many people with degrees (80th–99th percentile)	No data
Moderate	Moderate	Very low	High
Very clear, established, and accepted	Clear, established, and accepted	Very clear, established, and accepted	Two of the three criteria are absent
Very high	Low	Moderate	Very high
No armed conflict exists	No armed conflict exists	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Low	Moderate	Very low	High
Moderate	Moderate	High	Moderate
Moderate	Moderate	Very high	Moderate
Moderate	Moderate	Low	Moderate
Moderate	Very low	Low	Low
High	Very high	Low	Moderate
Very high	High	High	No data

RADIOLOGICAL

		Kazakhstan	Kenya	Kuwait
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	No or no data available	No or no data available
State Registry	Active registry	Yes	No or no data available	No or no data available
Inspection Authority	Inspection authority	Yes	No or no data available	No or no data available
Export Licenses	Licensing requirements	Yes	No or no data available	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	No	No
	Import Export Guidance	Yes	No	No
	Point of Contact	Yes	Yes	Yes
	Questionnaire	No	Yes	No
	Disused Sources Guidance	No	No	No
International Participation	GICNT	Yes	No	No
	Radioactive Material Conference	No	Yes	No
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	Yes	No	No
	Convention on Assistance	Yes	No	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	20th–39th percentile	60th–79th percentile	No data
	Tertiary degrees	60th–79th percentile	No data	20th–39th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	High	Moderate	Moderate
	Transfers of power	Not clear, established, or accepted	One of the three criteria is absent	Two of the three criteria are absent
	International disputes	High	High	Moderate
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	No armed conflict exists
	Violent demonstrations	High	Moderate	Low
Effective Governance	Effectiveness of political system	Low	Low	Moderate
	Quality of bureaucracy	Low	Very low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	High	Very high	Moderate
Illicit Activities by Non-State Actors	Terrorism	Moderate	Moderate	Moderate
	Organized crime	Moderate	High	Low
	Illicit arms flows	Very high	Very high	Very low

RADIOLOGICAL

Kyrgyz Republic	Lao PDR	Latvia	Lebanon
Yes	No or no data available	Yes	Yes
Yes	No or no data available	Yes	No or no data available
No or no data available	No or no data available	Yes	No or no data available
Yes	No or no data available	Yes	No or no data available
Yes	No or no data available	Yes	No or no data available
Yes	No	Yes	Yes
Yes	No	Yes	Yes
Yes	No	Yes	Yes
Yes	No	Yes	No
No	No	No	Yes
Yes	No	Yes	No
No	No	No	Yes
Yes	No	Yes	Yes
Yes	No	Yes	No
No	Yes	Yes	Yes
No	No	No	No
No	No	No	No
20th–39th percentile	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)	20th–39th percentile
40th–59th percentile	No data	60th–79th percentile	No data
High	Low	Moderate	Very high
One of the three criteria is absent	Not clear, established, or accepted	Clear, established, and accepted	Not clear, established, or accepted
Moderate	Low	Very high	Very high
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	Sporadic and incursive conflict
High	Low	Low	Very high
Very low	Very low	High	Very low
Very low	Low	Moderate	Very low
Very high	Very high	Low	Very high
Moderate	Low	Low	Very high
Very high	Very low	Low	Very high
Very low	No data	Low	High

RADIOLOGICAL

		Lesotho	Liberia	Libya
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	No or no data available	No or no data available	Yes
Security Measures	Security requirement	No or no data available	No or no data available	No or no data available
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	No or no data available	No or no data available	No or no data available
Export Licenses	Licensing requirements	No or no data available	No or no data available	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	No	Yes
	Import Export Guidance	Yes	No	Yes
	Point of Contact	No	No	Yes
	Questionnaire	No	No	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	No	No	Yes
	Radioactive Material Conference	No	No	Yes
International Conventions	ICSANT	Yes	No	Yes
	Joint Convention	Yes	No	No
	Convention on Assistance	Yes	No	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	40th–59th percentile	60th–79th percentile	No data
	Tertiary degrees	No data	No data	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Very high	High	High
	Transfers of power	Clear, established, and accepted	One of the three criteria is absent	Not clear, established, or accepted
	International disputes	High	Moderate	Very high
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Territorial conflict; opposition has effective control over a region or regions
	Violent demonstrations	High	High	High
Effective Governance	Effectiveness of political system	Low	Very low	Very low
	Quality of bureaucracy	Low	Very low	Very low
Pervasiveness of Corruption	Pervasiveness of corruption	High	High	Very high
Illicit Activities by Non-State Actors	Terrorism	Very low	Moderate	Very high
	Organized crime	High	Moderate	Very high
	Illicit arms flows	No data	No data	Low

RADIOLOGICAL

Lithuania	Luxembourg	Madagascar	Malawi
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	No or no data available	No or no data available	Yes
Yes	Yes	No or no data available	Yes
Yes	Yes	No or no data available	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	No	Yes
Yes	Yes	Yes	No
Yes	No	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	No	No
Yes	No	No	No
Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)	Frequent power outages (80th–99th percentile)	Frequent power outages (80th–99th percentile)
60th–79th percentile	Many people with degrees (80th–99th percentile)	Few people with degrees (0–19th percentile)	No data
Moderate	Very low	High	Very high
Clear, established, and accepted	Very clear, established, and accepted	One of the three criteria is absent	One of the three criteria is absent
Very high	Moderate	Low	High
No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
Low	Very low	High	High
High	Very high	Low	Very low
Moderate	High	Low	Very low
Moderate	Very low	Very high	Very high
Low	Low	Low	Very low
Low	Low	Very high	Low
Moderate	Moderate	Low	No data

RADIOLOGICAL

		Malaysia	Mali	Malta
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	Yes
State Registry	Active registry	Yes	Yes	Yes
Inspection Authority	Inspection authority	No or no data available	Yes	Yes
Export Licenses	Licensing requirements	Yes	Yes	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	Yes	No	Yes
	Radioactive Material Conference	Yes	No	No
International Conventions	ICSANT	No	Yes	Yes
	Joint Convention	No	No	Yes
	Convention on Assistance	No	Yes	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	20th–39th percentile	60th–79th percentile	Infrequent power outages (0–19th percentile)
	Tertiary degrees	20th–39th percentile	Few people with degrees (0–19th percentile)	40th–59th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Very high	Low
	Transfers of power	Clear, established, and accepted	Not clear, established, or accepted	Clear, established, and accepted
	International disputes	Moderate	Very high	Moderate
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Territorial conflict; opposition has effective control over a region or regions	No armed conflict exists
	Violent demonstrations	Low	Very high	Low
Effective Governance	Effectiveness of political system	Moderate	Very low	Moderate
	Quality of bureaucracy	Moderate	Very low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	High	High
Illicit Activities by Non-State Actors	Terrorism	Low	Very high	Low
	Organized crime	Low	High	Moderate
	Illicit arms flows	No data	No data	No data

RADIOLOGICAL

Mauritania	Mauritius	Mexico	Moldova
Yes	Yes	Yes	Yes
Yes	No or no data available	Yes	Yes
Yes	No or no data available	Yes	Yes
Yes	No or no data available	Yes	Yes
Yes	No or no data available	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	No	No
No	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	No	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	No	No	No
No	No	No	Yes
60th–79th percentile	40th–59th percentile	40th–59th percentile	20th–39th percentile
Few people with degrees (0–19th percentile)	No data	60th–79th percentile	40th–59th percentile
Moderate	Moderate	Moderate	Moderate
Two of the three criteria are absent	Clear, established, and accepted	One of the three criteria is absent	One of the three criteria is absent
High	Low	Moderate	Very high
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
Moderate	Low	Moderate	Moderate
Low	Moderate	Low	Low
Low	Moderate	Moderate	Low
High	Low	High	High
Low	Low	Moderate	Very low
Moderate	Low	Very high	High
No data	Very low	Very high	Moderate

RADIOLOGICAL

		Mongolia	Montenegro	Morocco
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	No or no data available	Yes	Yes
State Registry	Active registry	No or no data available	No or no data available	Yes
Inspection Authority	Inspection authority	No or no data available	Yes	Yes
Export Licenses	Licensing requirements	No or no data available	Yes	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	No	Yes	Yes
	Import Export Guidance	No	Yes	Yes
	Point of Contact	No	Yes	Yes
	Questionnaire	No	Yes	Yes
	Disused Sources Guidance	No	Yes	No
International Participation	GICNT	No	Yes	Yes
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	No	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	Yes
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	20th–39th percentile	20th–39th percentile	Infrequent power outages (0–19th percentile)
	Tertiary degrees	60th–79th percentile	No data	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	High	High	High
	Transfers of power	Very clear, established, and accepted	One of the three criteria is absent	Two of the three criteria are absent
	International disputes	High	High	Moderate
	Armed conflict	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
	Violent demonstrations	Moderate	High	Moderate
Effective Governance	Effectiveness of political system	Low	No data	Low
	Quality of bureaucracy	Low	Low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	High	High	High
Illicit Activities by Non-State Actors	Terrorism	Very low	Low	Moderate
	Organized crime	Low	Moderate	High
	Illicit arms flows	Very low	Moderate	Moderate

RADIOLOGICAL

Mozambique	Myanmar	Namibia	Nepal
Yes	Yes	Yes	No or no data available
Yes	No or no data available	Yes	No or no data available
Yes	No or no data available	Yes	No or no data available
Yes	No or no data available	Yes	No or no data available
Yes	No or no data available	Yes	No or no data available
Yes	Yes	Yes	No
Yes	No	Yes	No
Yes	No	Yes	No
Yes	No	Yes	No
No	No	No	No
No	No	No	Yes
No	Yes	No	Yes
No	No	Yes	No
No	No	No	No
Yes	Yes	Yes	No
No	No	No	No
No	No	No	No
40th–59th percentile	Frequent power outages (80th–99th percentile)	20th–39th percentile	Frequent power outages (80th–99th percentile)
Few people with degrees (0–19th percentile)	20th–39th percentile	No data	Few people with degrees (0–19th percentile)
High	Very high	Moderate	High
Two of the three criteria are absent	Not clear, established, or accepted	One of the three criteria is absent	One of the three criteria is absent
Low	Very high	Low	Moderate
Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic and incursive conflict	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Moderate	Very high	Moderate	High
Low	Very low	Moderate	Very low
Low	Very low	Moderate	Very low
High	Very high	Moderate	High
High	Very high	Very low	Moderate
High	High	Low	High
No data	Moderate	Low	Very low

RADIOLOGICAL

		Netherlands	New Zealand	Nicaragua
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	No or no data available
State Registry	Active registry	Yes	Yes	No or no data available
Inspection Authority	Inspection authority	No or no data available	Yes	No or no data available
Export Licenses	Licensing requirements	Yes	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	No	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	No	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	Yes	Yes	No
	Radioactive Material Conference	No	No	No
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	Yes	No	No
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	Infrequent power outages (0–19th percentile)	No data	40th–59th percentile
	Tertiary degrees	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	Low	High
	Transfers of power	Very clear, established, and accepted	Very clear, established, and accepted	Not clear, established, or accepted
	International disputes	High	No threat	Very high
	Armed conflict	No armed conflict exists	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
	Violent demonstrations	Low	Low	High
Effective Governance	Effectiveness of political system	Very high	Very high	Very low
	Quality of bureaucracy	High	High	Low
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	Very low	Very high
Illicit Activities by Non-State Actors	Terrorism	Low	Low	Low
	Organized crime	Very low	Very low	Moderate
	Illicit arms flows	Very high	Moderate	High

RADIOLOGICAL

Niger	Nigeria	North Korea	North Macedonia
Yes	Yes	No or no data available	Yes
Yes	Yes	No or no data available	Yes
Yes	Yes	No or no data available	No or no data available
Yes	Yes	No or no data available	Yes
Yes	Yes	No or no data available	Yes
Yes	Yes	No	Yes
Yes	No	No	Yes
Yes	Yes	No	Yes
Yes	No	No	Yes
No	Yes	No	Yes
No	Yes	No	Yes
Yes	Yes	No	No
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
No	No	No	No
No	No	No	No
Frequent power outages (80th–99th percentile)	Frequent power outages (80th–99th percentile)	No data	40th–59th percentile
Few people with degrees (0–19th percentile)	20th–39th percentile	No data	40th–59th percentile
High	High	Moderate	Moderate
Two of the three criteria are absent	Two of the three criteria are absent	Not clear, established, or accepted	One of the three criteria is absent
High	Low	Very high	High
Territorial conflict; opposition has effective control over a region or regions	Sporadic and incursive conflict	Sporadic and incursive conflict	No armed conflict exists
High	High	Low	Moderate
Low	Very low	Very low	Moderate
Low	Very low	Low	Low
High	Very high	Very high	High
Very high	High	Low	Moderate
High	High	High	Moderate
No data	No data	No data	Low

RADIOLOGICAL

		Norway	Oman	Pakistan
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	No or no data available	Yes	Yes
State Registry	Active registry	No or no data available	No or no data available	Yes
Inspection Authority	Inspection authority	No or no data available	No or no data available	Yes
Export Licenses	Licensing requirements	No or no data available	No or no data available	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	No	No
	Disused Sources Guidance	No	Yes	Yes
International Participation	GICNT	Yes	No	Yes
	Radioactive Material Conference	No	No	Yes
International Conventions	ICSANT	Yes	Yes	No
	Joint Convention	Yes	Yes	No
	Convention on Assistance	No	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	No	No
Implementation	Alternative technology commitment	Yes	No	No
Capacity	Power outages	No data	No data	Frequent power outages (80th–99th percentile)
	Tertiary degrees	Many people with degrees (80th–99th percentile)	40th–59th percentile	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	Moderate	Very high
	Transfers of power	Very clear, established, and accepted	One of the three criteria is absent	One of the three criteria is absent
	International disputes	Moderate	Moderate	High
	Armed conflict	No armed conflict exists	No armed conflict exists	Sporadic and incursive conflict
	Violent demonstrations	Low	Moderate	High
Effective Governance	Effectiveness of political system	Very high	Moderate	Very low
	Quality of bureaucracy	Very high	Moderate	Low
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	Moderate	High
Illicit Activities by Non-State Actors	Terrorism	Moderate	Low	Very high
	Organized crime	Very low	Very low	High
	Illicit arms flows	High	No data	No data

RADIOLOGICAL

Panama	Papua New Guinea	Paraguay	Peru
Yes	Yes	Yes	Yes
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
Yes	No	Yes	Yes
Yes	No	Yes	Yes
Yes	No	Yes	Yes
Yes	No	Yes	Yes
No	No	No	No
Yes	No	Yes	No
Yes	No	No	Yes
Yes	No	Yes	Yes
No	No	Yes	Yes
Yes	No	Yes	Yes
No	No	No	No
No	No	No	No
20th–39th percentile	Frequent power outages (80th–99th percentile)	40th–59th percentile	20th–39th percentile
40th–59th percentile	No data	20th–39th percentile	No data
High	High	Moderate	High
One of the three criteria is absent	Two of the three criteria are absent	Two of the three criteria are absent	One of the three criteria is absent
Moderate	Low	No threat	Moderate
No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
High	High	Moderate	Very high
Moderate	Low	Moderate	Low
Moderate	Low	Low	Moderate
High	High	High	High
Very low	Low	Low	Low
High	High	Low	High
High	No data	Very low	High

RADIOLOGICAL

		Philippines	Poland	Portugal
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	No or no data available
State Registry	Active registry	Yes	Yes	No or no data available
Inspection Authority	Inspection authority	Yes	Yes	No or no data available
Export Licenses	Licensing requirements	Yes	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	Yes	No	Yes
International Participation	GICNT	Yes	Yes	Yes
	Radioactive Material Conference	Yes	Yes	Yes
International Conventions	ICSANT	No	Yes	Yes
	Joint Convention	No	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	Yes	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)
	Tertiary degrees	60th–79th percentile	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Moderate	Moderate
	Transfers of power	Clear, established, and accepted	Very clear, established, and accepted	Clear, established, and accepted
	International disputes	Moderate	High	Moderate
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	No armed conflict exists
	Violent demonstrations	Moderate	Low	Low
Effective Governance	Effectiveness of political system	Moderate	Moderate	High
	Quality of bureaucracy	Moderate	Moderate	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	High	Moderate	Moderate
Illicit Activities by Non-State Actors	Terrorism	Low	Low	Very low
	Organized crime	Very high	Low	Very low
	Illicit arms flows	Very low	Moderate	Very high

RADIOLOGICAL

Qatar	Romania	Russia	Rwanda
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No or no data available	No or no data available	Yes	No or no data available
Yes	Yes	Yes	Yes
Yes	Yes	Yes	No or no data available
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	No	Yes
No	Yes	Yes	No
No	Yes	Yes	No
Yes	Yes	Yes	No
No	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	No	No
No	No	No	No
No data	40th–59th percentile	Infrequent power outages (0–19th percentile)	60th–79th percentile
40th–59th percentile	20th–39th percentile	Many people with degrees (80th–99th percentile)	Few people with degrees (0–19th percentile)
Very low	Low	Moderate	Low
One of the three criteria is absent	Clear, established, and accepted	Not clear, established, or accepted	Not clear, established, or accepted
Low	High	Very high	High
No armed conflict exists	No armed conflict exists	Territorial conflict; opposition has effective control over a region or regions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Very low	Low	Moderate	Low
Moderate	Moderate	Very low	Moderate
Moderate	Moderate	Low	Moderate
Low	Moderate	Very high	Moderate
Low	Low	Low	Moderate
Very low	Moderate	High	Low
Low	Low	Very high	No data

RADIOLOGICAL

		Samoa	São Tomé and Príncipe	Saudi Arabia
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	No or no data available	No or no data available	Yes
Security Measures	Security requirement	No or no data available	No or no data available	Yes
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	No or no data available	No or no data available	Yes
Export Licenses	Licensing requirements	No or no data available	No or no data available	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	No	No	Yes
	Import Export Guidance	No	No	Yes
	Point of Contact	No	No	Yes
	Questionnaire	No	No	Yes
	Disused Sources Guidance	No	No	Yes
International Participation	GICNT	No	No	Yes
	Radioactive Material Conference	No	No	Yes
International Conventions	ICSANT	No	No	Yes
	Joint Convention	No	No	Yes
	Convention on Assistance	No	No	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	60th–79th percentile	No data	No data
	Tertiary degrees	Few people with degrees (0–19th percentile)	Few people with degrees (0–19th percentile)	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	No data	Moderate	Moderate
	Transfers of power	No data	Two of the three criteria are absent	One of the three criteria is absent
	International disputes	No data	Low	High
	Armed conflict	No data	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
	Violent demonstrations	No data	Moderate	Low
Effective Governance	Effectiveness of political system	No data	Moderate	Moderate
	Quality of bureaucracy	No data	Low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	No data	Low	Moderate
Illicit Activities by Non-State Actors	Terrorism	No data	Very low	Moderate
	Organized crime	High	Low	Low
	Illicit arms flows	No data	No data	No data

RADIOLOGICAL

Senegal	Serbia	Seychelles	Sierra Leone
Yes	Yes	Yes	Yes
No or no data available	Yes	No or no data available	Yes
No or no data available	Yes	No or no data available	Yes
No or no data available	Yes	No or no data available	Yes
No or no data available	Yes	No or no data available	Yes
Yes	Yes	Yes	No
Yes	No	Yes	No
Yes	Yes	Yes	No
Yes	No	Yes	No
No	No	No	No
No	Yes	Yes	No
Yes	Yes	No	No
No	Yes	No	No
Yes	Yes	No	No
Yes	Yes	No	No
No	No	No	No
No	No	No	No
60th–79th percentile	20th–39th percentile	No data	Frequent power outages (80th–99th percentile)
Few people with degrees (0–19th percentile)	20th–39th percentile	No data	Few people with degrees (0–19th percentile)
Moderate	High	Moderate	High
Clear, established, and accepted	One of the three criteria is absent	Clear, established, and accepted	One of the three criteria is absent
Moderate	High	Low	Low
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Moderate	Moderate	Low	High
Moderate	Moderate	High	Very low
Moderate	Low	Moderate	Low
Moderate	High	Very low	Very high
Moderate	Low	Very low	Moderate
Moderate	Moderate	Low	Moderate
No data	High	No data	No data

RADIOLOGICAL

		Singapore	Slovak Republic	Slovenia
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	Yes
State Registry	Active registry	No or no data available	No or no data available	Yes
Inspection Authority	Inspection authority	No or no data available	Yes	Yes
Export Licenses	Licensing requirements	Yes	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	No	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	No	Yes
	Disused Sources Guidance	Yes	No	No
International Participation	GICNT	Yes	Yes	Yes
	Radioactive Material Conference	Yes	No	Yes
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	No	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	No	Yes
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	No data	20th–39th percentile	Infrequent power outages (0–19th percentile)
	Tertiary degrees	60th–79th percentile	40th–59th percentile	40th–59th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Very low	Moderate	Moderate
	Transfers of power	Clear, established, and accepted	Clear, established, and accepted	Clear, established, and accepted
	International disputes	Low	High	Moderate
	Armed conflict	No armed conflict exists	No armed conflict exists	No armed conflict exists
	Violent demonstrations	Very low	Low	Low
Effective Governance	Effectiveness of political system	Very high	High	High
	Quality of bureaucracy	Very high	High	High
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	Moderate	Low
Illicit Activities by Non-State Actors	Terrorism	Very low	Very low	Very low
	Organized crime	Very low	Moderate	Low
	Illicit arms flows	No data	High	Moderate

RADIOLOGICAL

Solomon Islands	Somalia	South Africa	South Korea
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
No	No	Yes	Yes
No	No	Yes	Yes
Yes	No	Yes	Yes
No	No	Yes	Yes
No	No	No	No
No	No	No	Yes
No	No	Yes	Yes
Yes	No	Yes	Yes
No	No	Yes	Yes
No	No	Yes	Yes
No	No	No	Yes
No	No	No	No
60th–79th percentile	No data	Frequent power outages (80th–99th percentile)	No data
No data	No data	20th–39th percentile	60th–79th percentile
No data	Very high	High	Moderate
No data	Two of the three criteria are absent	Clear, established, and accepted	Very clear, established, and accepted
No data	Very high	No threat	High
No data	Territorial conflict; opposition has effective control over a region or regions	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
No data	Very high	High	Moderate
No data	Very low	High	High
No data	Very low	Moderate	Very high
No data	Very high	Moderate	Low
No data	Very high	Low	Very low
High	Very high	High	Low
No data	No data	No data	No data

RADIOLOGICAL

		Spain	Sri Lanka	Sudan
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	No or no data available
State Registry	Active registry	Yes	Yes	No or no data available
Inspection Authority	Inspection authority	Yes	Yes	No or no data available
Export Licenses	Licensing requirements	Yes	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	Yes	No	Yes
International Participation	GICNT	Yes	Yes	No
	Radioactive Material Conference	Yes	No	Yes
International Conventions	ICSANT	Yes	Yes	No
	Joint Convention	Yes	No	No
	Convention on Assistance	Yes	Yes	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	Infrequent power outages (0–19th percentile)	60th–79th percentile	60th–79th percentile
	Tertiary degrees	Many people with degrees (80th–99th percentile)	No data	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Very high	Very high
	Transfers of power	Clear, established, and accepted	One of the three criteria is absent	Not clear, established, or accepted
	International disputes	High	Low	Very high
	Armed conflict	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Territorial conflict; opposition has effective control over a region or regions
	Violent demonstrations	Moderate	Very high	Very high
Effective Governance	Effectiveness of political system	High	Low	Very low
	Quality of bureaucracy	High	Low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	Moderate	Very high
Illicit Activities by Non-State Actors	Terrorism	Moderate	Moderate	High
	Organized crime	Low	Low	Moderate
	Illicit arms flows	Very high	No data	Moderate

RADIOLOGICAL

Suriname	Sweden	Switzerland	Syrian Arab Republic
No or no data available	Yes	Yes	Yes
No or no data available	No or no data available	Yes	No or no data available
No or no data available	No or no data available	Yes	No or no data available
No or no data available	No or no data available	Yes	No or no data available
No or no data available	No or no data available	Yes	No or no data available
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	No
No	Yes	Yes	No
No	Yes	Yes	Yes
No	Yes	Yes	No
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	No
No	Yes	No	No
60th–79th percentile	Infrequent power outages (0–19th percentile)	No data	No data
20th–39th percentile	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)	No data
High	Low	Low	Very high
One of the three criteria is absent	Very clear, established, and accepted	Very clear, established, and accepted	Not clear, established, or accepted
Low	Low	Moderate	Very high
No armed conflict exists	No armed conflict exists	No armed conflict exists	Territorial conflict; opposition has effective control over a region or regions
High	Very low	Very low	Very high
Low	Very high	Very high	Very low
Low	Very high	High	Very low
High	Very low	Very low	Very high
Very low	Low	Very low	Very high
Moderate	Very low	Low	Very high
Low	High	No data	No data

RADIOLOGICAL

		Taiwan	Tajikistan	Tanzania
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	No or no data available	Yes	Yes
Security Measures	Security requirement	No or no data available	No or no data available	Yes
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	No or no data available	No or no data available	Yes
Export Licenses	Licensing requirements	No or no data available	No or no data available	Yes
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	No	Yes	Yes
	Import Export Guidance	No	Yes	Yes
	Point of Contact	No	Yes	Yes
	Questionnaire	No	Yes	No
	Disused Sources Guidance	No	Yes	No
International Participation	GICNT	No	Yes	No
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	No	Yes	No
	Joint Convention	No	Yes	No
	Convention on Assistance	No	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	No data	40th–59th percentile	Frequent power outages (80th–99th percentile)
	Tertiary degrees	No data	20th–39th percentile	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	Moderate	Moderate
	Transfers of power	Clear, established, and accepted	Not clear, established, or accepted	One of the three criteria is absent
	International disputes	High	Very high	Moderate
	Armed conflict	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
	Violent demonstrations	Low	Moderate	Moderate
Effective Governance	Effectiveness of political system	High	Very low	Low
	Quality of bureaucracy	High	Very low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	Low	Very high	High
Illicit Activities by Non-State Actors	Terrorism	Very low	Moderate	Moderate
	Organized crime	Low	High	Moderate
	Illicit arms flows	No data	Low	No data

RADIOLOGICAL

Thailand	Timor-Leste	Togo	Tonga
Yes	No or no data available	No or no data available	No or no data available
Yes	No or no data available	No or no data available	No or no data available
No or no data available	No or no data available	No or no data available	No or no data available
Yes	No or no data available	No or no data available	No or no data available
Yes	No or no data available	No or no data available	No or no data available
Yes	No	Yes	No
Yes	No	Yes	No
Yes	No	Yes	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
No	No	No	No
Infrequent power outages (0–19th percentile)	40th–59th percentile	60th–79th percentile	40th–59th percentile
40th–59th percentile	No data	No data	No data
Moderate	Moderate	High	No data
Two of the three criteria are absent	One of the three criteria is absent	Two of the three criteria are absent	No data
Moderate	Moderate	High	No data
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No data
Moderate	Moderate	High	No data
Moderate	Very low	Low	No data
Moderate	Very low	Very low	No data
High	High	High	No data
Low	Low	Moderate	No data
Moderate	Moderate	Moderate	High
No data	No data	Low	No data

RADIOLOGICAL

		Trinidad and Tobago	Tunisia	Turkey
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	No or no data available	No or no data available	No or no data available
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	No or no data available	No or no data available	No or no data available
Export Licenses	Licensing requirements	No or no data available	No or no data available	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	No	Yes	Yes
	Import Export Guidance	No	No	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	No	No	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	No	No	Yes
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	No	Yes	Yes
	Joint Convention	No	No	Yes
	Convention on Assistance	No	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	20th–39th percentile	20th–39th percentile	20th–39th percentile
	Tertiary degrees	Few people with degrees (0–19th percentile)	No data	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Very high	High
	Transfers of power	Clear, established, and accepted	Two of the three criteria are absent	Two of the three criteria are absent
	International disputes	Moderate	High	Very high
	Armed conflict	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
	Violent demonstrations	Moderate	Very high	Moderate
Effective Governance	Effectiveness of political system	Low	Moderate	Low
	Quality of bureaucracy	Low	Moderate	Low
Pervasiveness of Corruption	Pervasiveness of corruption	High	High	High
Illicit Activities by Non-State Actors	Terrorism	Low	High	Moderate
	Organized crime	High	Moderate	High
	Illicit arms flows	No data	Moderate	High

RADIOLOGICAL

Turkmenistan	Uganda	Ukraine	United Arab Emirates
No or no data available	Yes	Yes	Yes
No or no data available	Yes	Yes	Yes
No or no data available	No or no data available	Yes	Yes
No or no data available	Yes	Yes	Yes
No or no data available	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	No
No	No	Yes	No
Yes	No	Yes	Yes
No	Yes	Yes	Yes
Yes	No	Yes	Yes
No	No	Yes	Yes
No	No	Yes	Yes
No	No	No	No
No	No	No	No
No data	60th–79th percentile	20th–39th percentile	No data
No data	Few people with degrees (0–19th percentile)	40th–59th percentile	Many people with degrees (80th–99th percentile)
Moderate	High	Very high	Very low
Not clear, established, or accepted	Not clear, established, or accepted	Not clear, established, or accepted	Clear, established, and accepted
High	Moderate	Very high	High
No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Territorial conflict; opposition has effective control over a region or regions	No armed conflict exists
Low	High	Very high	Very low
Very low	Low	Low	Moderate
Very low	Low	Low	Moderate
Very high	High	Very high	Low
Low	Very high	High	Low
Low	Low	High	Low
No data	No data	High	No data

RADIOLOGICAL

		United Kingdom	United States	Uruguay
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	No or no data available
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	Yes	Yes	No or no data available
Export Licenses	Licensing requirements	Yes	Yes	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	Yes	Yes
	Disused Sources Guidance	No	Yes	Yes
International Participation	GICNT	Yes	Yes	No
	Radioactive Material Conference	Yes	Yes	Yes
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	Yes	Yes	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	Yes	Yes	No
Implementation	Alternative technology commitment	Yes	Yes	No
Capacity	Power outages	No data	No data	20th–39th percentile
	Tertiary degrees	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)	20th–39th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	Moderate	Moderate
	Transfers of power	Very clear, established, and accepted	Clear, established, and accepted	Very clear, established, and accepted
	International disputes	Low	Moderate	Moderate
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
	Violent demonstrations	Low	Moderate	Moderate
Effective Governance	Effectiveness of political system	Very high	High	High
	Quality of bureaucracy	High	High	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	Low	Very low
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	Very low
	Organized crime	Low	Low	Low
	Illicit arms flows	High	Very high	High

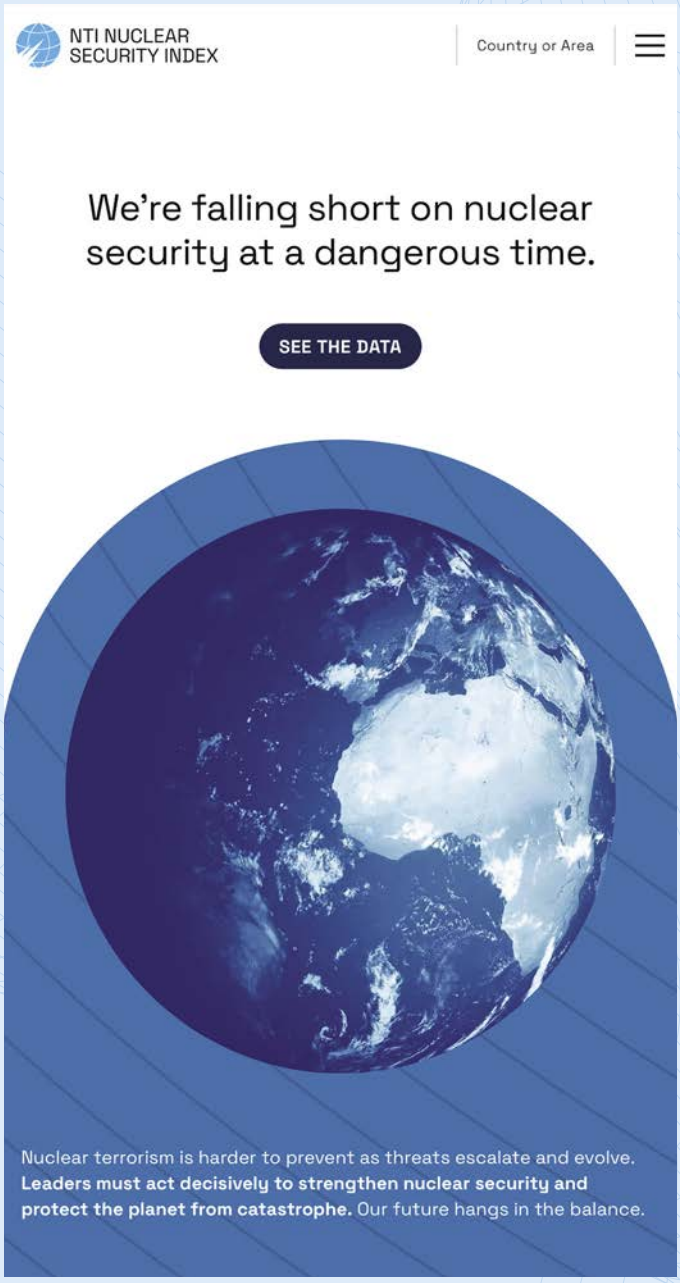
RADIOLOGICAL

Uzbekistan	Vanuatu	Venezuela	Vietnam
Yes	No or no data available	Yes	Yes
Yes	No or no data available	No or no data available	Yes
No or no data available	No or no data available	No or no data available	Yes
No or no data available	No or no data available	No or no data available	Yes
Yes	No or no data available	No or no data available	Yes
Yes	No	Yes	Yes
No	No	No	Yes
No	No	Yes	Yes
No	No	Yes	No
No	No	No	No
Yes	No	No	Yes
No	No	Yes	Yes
Yes	No	No	Yes
Yes	No	No	Yes
No	No	No	Yes
No	No	No	No
No	No	No	No
40th–59th percentile	40th–59th percentile	60th–79th percentile	Infrequent power outages (0–19th percentile)
40th–59th percentile	No data	60th–79th percentile	No data
Moderate	No data	Very high	Low
Not clear, established, or accepted	No data	Not clear, established, or accepted	Not clear, established, or accepted
High	No data	Very high	Moderate
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No data	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	No armed conflict exists
Moderate	No data	Very high	Moderate
Very low	No data	Very low	Low
Very low	No data	Very low	Low
Very high	No data	Very high	High
Moderate	No data	Moderate	Very low
Moderate	High	Very high	Moderate
Very low	No data	No data	No data

RADIOLOGICAL

		Yemen	Zambia	Zimbabwe
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	No or no data available	No or no data available	No or no data available
State Registry	Active registry	No or no data available	No or no data available	No or no data available
Inspection Authority	Inspection authority	No or no data available	No or no data available	No or no data available
Export Licenses	Licensing requirements	No or no data available	No or no data available	No or no data available
GLOBAL NORMS				
IAEA Code of Conduct Status	Political commitment	Yes	Yes	Yes
	Import Export Guidance	Yes	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	No	Yes	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	No	Yes	No
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	Yes	Yes	No
	Joint Convention	No	No	Yes
	Convention on Assistance	No	No	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No	No	No
Capacity	Power outages	Frequent power outages (80th–99th percentile)	Frequent power outages (80th–99th percentile)	60th–79th percentile
	Tertiary degrees	No data	No data	Few people with degrees (0–19th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Very high	Moderate	Very high
	Transfers of power	Not clear, established, or accepted	One of the three criteria is absent	Not clear, established, or accepted
	International disputes	Very high	Moderate	Moderate
	Armed conflict	Territorial conflict; opposition has effective control over a region or regions	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
	Violent demonstrations	Very high	Low	Very high
Effective Governance	Effectiveness of political system	Very low	Low	Very low
	Quality of bureaucracy	Very low	Low	Very low
Pervasiveness of Corruption	Pervasiveness of corruption	Very high	High	Very high
Illicit Activities by Non-State Actors	Terrorism	Very high	Very low	Low
	Organized crime	Very high	Moderate	High
	Illicit arms flows	No data	Very low	No data

Explore the NTI Nuclear Security Index and the Radioactive Source Security Assessment at **www.ntiindex.org**.



- See profiles for all countries and areas in the NTI Index.
- Explore how specific actions would improve a country or area's score.
- Compare country and area scores, ranks, and trends.
- Review the methodologies, including detailed descriptions of NTI Index indicators.
- Download Excel spreadsheets to analyze all NTI Index data.

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