NTI NUCLEAR SECURITY INDEX

Theft / Sabotage / Radiological

JULY 2020

Losing Focus in a Disordered World

NTI

BUILDING A SAFER WORLD

The NTI Nuclear Security Index

The 2020 Nuclear Threat Initiative (NTI) Nuclear Security Index (NTI Index) assesses the security of some of the deadliest materials in the world—highly enriched uranium (HEU) and plutonium—against theft and the security of nuclear facilities against sabotage. Stolen HEU or plutonium could be used to build a nuclear bomb; the sabotage of a nuclear facility could result in a dangerous release of radiation.

The NTI Index uses public information to track country-level progress on nuclear security and recommends actions for governments to protect nuclear materials and facilities and to strengthen the global nuclear security architecture. Developed with the Economist Intelligence Unit (EIU) and informed by an international panel of respected nuclear security experts, the NTI Index has been released biennially since 2012. The NTI 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 to assess actions related to securing 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 related to supporting global nuclear security efforts
- **Sabotage: Protect Facilities**—A ranking of 46 countries and Taiwan with nuclear facilities, such as nuclear power reactors and research reactors, to assess actions related to protecting those facilities against sabotage

For the first time, the 2020 NTI Index is accompanied by a separate **Radioactive Source Security Assessment** that assesses the national policies, commitments, and actions to secure radioactive sources and prevent a dirty bomb in 175 countries and Taiwan. This new assessment does not score or rank countries.

All data are available in Excel models and can be downloaded at **www.ntiindex.org**.

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FIFTH EDITION

JULY 2020

Index developed with

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NTI owes a deep debt of gratitude to the expert panels for both the NTI Index and the new Radioactive Source Security Assessment. Panel members are some of the most highly respected experts from around the world, and they have been extremely generous with their time as we undertook the most extensive revision of the Index framework since its first edition. Their collective wisdom provided a solid foundation for this report.

We also appreciate the many officials and experts who participated in briefings and who provided their critical insights to this edition of the NTI Index. They include government officials who took the time to review and comment on the data gathered by the EIU so that the NTI Index is 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 thankful for the generous grant from the Peter G. Peterson Foundation to support the 2020 edition of the NTI Index.

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Foreword

The world today faces complex and potentially catastrophic threats: the slow burn, quite literally, of climate change; a naturally occurring or manufactured virus that kills millions of people worldwide; a radiological dirty bomb explosion that renders a city center uninhabitable for years; a nuclear weapons exchange that could incinerate entire countries; or the detonation of a terrorist nuclear bomb built from stolen nuclear material that kills thousands of people in an instant. All would create additional, enormous consequences for our environment, global economies, and humanity as a whole.

The COVID-19 pandemic offers a window into the grave implications of poor planning to prevent a crisis from emerging and then escalating. Preventing a naturally occurring virus is tough, but there have been countless missed opportunities to slow the spread and stem the damage—and the unfolding disaster has offered a powerful lesson in the importance of prevention and preparation, coordination and cooperation, accountability and action—all grounded in attention to the science.

These fundamentals are the foundation for the NTI Nuclear Security Index, a biennial ranking of nuclear security conditions worldwide that recommends steps that countries and the global community should take to strengthen security of nuclear materials and nuclear facilities and evaluates progress against those steps. Born out of concern the world is not doing enough to prevent a terrorist attack with almost incomprehensible consequences, the NTI Index has tracked progress and provided guidance on nuclear security since 2012.

This year, for the first time, the results show that progress to secure nuclear materials and facilities has slowed significantly. This is an alarming development for a host of reasons. It comes at a time when the global risk environment is characterized by growing disorder and disruption and the international community's ability to manage cross-border threats is taxed. Disinformation and disruptive technologies have added to governments' challenges, and

This year, for the first time, the results show that progress to secure nuclear materials and facilities has slowed significantly.

NTI Vice President Laura S. H. Holgate (left) and Senior Director Samantha Neakrase (right) lead discussions with the International Panel of Experts.

intensified competition among major nuclear powers—particularly the United States, Russia, and China—has strained international institutions, treaties, and norms. Constant vigilance by nuclear operators, governments, and international organizations will be needed to keep pace with the threats in this increasingly dangerous risk environment.

The key finding of this year's NTI Index may be an outcome of the end of the series of Nuclear Security Summits—head-of-state events begun in 2010 and held every two years through 2016 that brought high-level attention to nuclear dangers, promoted efforts to reduce them, and resulted in important progress toward securing materials and facilities against nuclear terrorism and other threats.

Security improvements captured by the NTI Index between 2012 and 2018 reflected the work of the summits. Since the summit process ended in 2016, no comparable, cooperative global effort has emerged to replace the summits' role in galvanizing countries to take bold, ambitious actions—even as the terrorist threat and new concerns such as cyber attacks on nuclear facilities, continue to mount. Now, in the first reflection of the post-summit nuclear security landscape, it is no surprise that progress has slowed.

Given the challenging security backdrop for this key finding, it is more important than ever to identify shortfalls and to call for governments, industry, and the international community to once again step up their efforts to prevent a catastrophic attack or act of sabotage that could further shake global foundations.

We all know this work can be successful. In 2012, when the NTI Index was launched, 32 countries had 1 kilogram or more of weapons-usable nuclear materials; today, that number is 22, and the countries that have addressed the threat in the most permanent ways possible—by eliminating or disposing of all of their weapons-usable nuclear materials—are a model for the world. Scores of countries also have taken important steps to mitigate the threat of theft or sabotage by improving physical security around materials and facilities, tightening security during transport of materials, expanding cybersecurity practices, adopting new insider threat-prevention measures, and more.

No one should conclude, however, that progress has slowed because much of the work is completed. That is simply not the case. As the data show, large gaps remain across all the categories and indicators we examine—and the report shows major weaknesses in key areas such as insider threat prevention, security culture at facilities, and cybersecurity. More rigorous threat assessments, personnel vetting, and new regulations, among other steps, must be put in place before extremists exploit weaknesses in these areas and do real damage. Continuous improvement—even among high-performing

> In 2012, when the NTI Index was launched, 32 countries had 1 kilogram or more of weapons-usable nuclear materials; today, that number is 22, and the countries that have addressed the threat in the most permanent ways possible—by eliminating or disposing of all of their weapons-usable nuclear materials—are a model for the world.

countries—must also be a priority, not only to keep pace with, but to stay ahead of, evolving threats.

Thousands of radiological sources held in every country offer extremists another path to cause chaos—and in conjunction with the NTI Index, we are releasing a first-of-its-kind Radioactive Source Security Assessment that examines national policies and actions to secure these potentially dangerous sources. Typically used for research, medical, industrial, or agricultural purposes, the sources often are poorly secured and housed in areas open to the public, such as hospitals and universities. In the hands of an extremist, a radiological source can be used to build and detonate a radiation-spewing dirty bomb in the heart of a city.

Unlike weapons-usable nuclear materials, these sources don't pose an existential threat, and a dirty bomb would not cause mass casualties or injuries—but cleanup would be enormously costly, environmental and psychological consequences would be significant, and the area around a detonation would be uninhabitable for years.

The good news is that the risk can be eliminated by replacing the dangerous sources with equally effective alternative technologies. NTI has worked closely with New York City, Atlanta, and the state of California—along with Central Asia and the United Kingdom—to do just that. We hope the new assessment included in these pages will build increased awareness of the risk, start a broader discussion about alternatives, and highlight best practices for keeping sources secure.

As we've learned through the COVID-19 pandemic, global security is only as strong as the weakest link. When it comes to existential threats—and even to those that could do just serious damage—every country can do more and must do more. Leaders around the world have a responsibility to use all the tools at their disposal, from the adoption and enforcement of new security requirements to coordinating and cooperating with other countries, to protect against nuclear and radiological terrorism so that we never have to face the terrible consequences.

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

Executive Summary

Losing Focus in a Disordered World

Progress on global nuclear security has slowed significantly over the past two years, despite sizeable gaps that continue to leave nuclear materials and facilities vulnerable to theft and acts of sabotage.

Progress on global nuclear security has slowed significantly over the past two years, despite sizeable gaps that continue to leave nuclear materials and facilities vulnerable to theft and acts of sabotage. The 2020 NTI Nuclear Security Index finds that although a great deal of work remains to protect materials and facilities against increasingly capable extremist groups, the rate of improvement to national regulatory structures and the global nuclear security architecture has declined since 2018. This reverses a trend of substantial improvements made between 2012 and 2018, and it comes at a time when prospects for improving efforts to prevent nuclear terrorism are complicated by growing global disorder and disruption.

The decline highlighted in the 2020 NTI Index suggests that without the driving force of the Nuclear Security Summits, which ended in 2016, or similar high-level events, attention to nuclear security has waned. This is a particularly dangerous development when terrorist capabilities and growing cyber threats contribute to a more complicated and unpredictable environment and geopolitical tensions and events such as the COVID-19 pandemic are challenging cooperation and exposing the limits of how countries cope with cross-border threats.

Recognized as the premier resource and tool for tracking progress on global nuclear security, the NTI Index assesses nuclear security conditions in 175 countries and Taiwan. It assesses (a) actions to secure nuclear materials in the 22 countries that have 1 kilogram or more of weapons-usable nuclear materials, the highly enriched uranium and plutonium that can be stolen and used to build nuclear bombs; (b) actions to protect nuclear facilities in 46 countries and Taiwan that have nuclear facilities at which an act of sabotage could result in a dangerous

To address the overall finding that progress has slowed significantly, countries must strengthen and sustain political attention on nuclear security to drive progress on adopting nuclear security regulations and on building a more effective global nuclear security architecture.

release of radiation; and (c) actions in 153 countries and Taiwan that have less than 1 kilogram of or no weapons-usable nuclear materials to determine how well they support global nuclear security efforts.

NTI Index results and recommendations, released biennially since 2012 and using publicly available information, help guide governments and industry on how best to develop and implement security measures around some of the world's deadliest materials. For each of the five editions of the Index, NTI and its partner, the Economist Intelligence Unit (EIU), have updated the categories and indicators to reflect changing global threat levels, risks posed by evolving practices and technologies, and input from an international panel of nuclear security experts. For the 2020 NTI Index, updates were made across all rankings to account for progress made over the past decade and the availability of new tools to address risks.

For the first time, NTI this year is releasing a separate Radioactive Source Security Assessment in conjunction with the NTI Index. The first-of-its-kind assessment, which does not rank or score countries, evaluates national policies, commitments, and actions taken in 175 countries and Taiwan to prevent the theft of radioactive materials that could be used to build dirty bombs. The key finding: the international architecture for radiological security is extremely weak, and thousands of radioactive sources remain vulnerable to theft from the hospitals, university labs, and industrial sites where they are used for a variety of beneficial purposes. Although the use of a radiological dirty bomb would not have consequences approaching the scale of those caused by a nuclear detonation, the likelihood that one will be detonated is far greater and the consequences would still be significant: environmental and psychological damage, enormous cleanup costs, and the inability to use the area around the explosion for years.

TOP NTI INDEX FINDINGS AND RECOMMENDATIONS

Australia ranks first for its security practices for the fifth time among countries with weapons-usable nuclear materials and for the third time in the sabotage ranking. In the ranking for countries without materials, New Zealand and Sweden tie for first. Most improved among countries with materials in 2020 is Pakistan, which was credited with adopting new on-site physical protection and cybersecurity regulations, improving insider threat prevention measures, and more.

To address the overall finding that progress has slowed significantly, countries must strengthen and sustain political attention on nuclear security to drive progress on adopting nuclear security regulations and on building a more effective global nuclear security architecture. One way to do this is to send high-level delegations to upcoming conferences and meetings to make commitments and to report on progress.

The NTI Index includes nine additional high-level findings and recommendations.

- **No countries have eliminated their stocks of weapons-usable nuclear materials since 2016, and the number of countries with those materials has plateaued.** Decreases in quantities of materials also are slowing. Countries with materials should revive efforts to reduce stocks of highly enriched uranium and plutonium and should focus on long-term, sustainable stewardship of materials.
- **Regulatory requirements for nuclear security are not comprehensive, with significant weaknesses in key areas such as insider threat prevention, security culture, and cybersecurity.** Countries must strengthen these regimes; theft of nuclear materials or sabotage of a nuclear facility anywhere in the world would have significant implications for all countries, including potential public backlash against the use of peaceful nuclear technology, such as nuclear energy.
- **Countries do not have adequate measures in place to address the human factor of nuclear security.** Countries must strengthen insider threat-prevention measures and security culture.
- **Cybersecurity regulations are slowly adapting to the growing cyber threat to nuclear facilities, but the adoption of these requirements continues to trail the urgency of the threat.** Given the rapid evolution of cyber threats, countries must strengthen cybersecurity at nuclear facilities including through (a) integrating physical protection and cybersecurity; (b) protecting critical digital assets, such as systems related to physical protection, control, accounting, and safety; and (c) building greater awareness of cyber threats among facility personnel.
- **Despite continued actions to strengthen the global nuclear security architecture, the rate of improvement has slowed and significant gaps in the architecture remain.** Countries must work to strengthen and sustain political attention on nuclear security, the International Atomic Energy Agency (IAEA) and the United Nations should work to achieve universalization of key legal instruments governing nuclear security, and countries should implement their treaty obligations and participate in voluntary initiatives, among other steps.

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 the Economist Intelligence Unit**
- **Advised by an international panel of experts**
- **Government input provided through data confirmation**

- **Countries without nuclear materials are not sufficiently engaged in efforts to bolster the global nuclear security architecture.** To address regional disparities and conflicting priorities, the IAEA should work with countries to build a stronger, more inclusive narrative around nuclear security, stressing that nuclear security is critical to maintaining public support for peaceful uses of nuclear technology.
- **The IAEA still lacks the political and financial support it needs to fulfill its nuclear security mission.** Countries should increase support for the IAEA by contributing to its Nuclear Security Fund and supporting and participating in IAEA activities, and the IAEA should work to build awareness of those activities and of how it has helped countries benefit from peaceful nuclear use.
- **With the exception of publishing regulations, countries' actions to build confidence in nuclear security through information sharing and peer review remain limited.** Countries should increase transparency and confidence by publishing annual nuclear security reports, by making public declarations about their progress on nuclear security, and by participating regularly in peer reviews, among other steps.
- **More countries are interested in acquiring nuclear technology for research or energy purposes, but nine countries planning new nuclear power programs have varying levels of preparedness to take on nuclear security responsibilities.** To be responsible stewards, countries considering new nuclear energy capabilities should establish legal and regulatory frameworks that address insider threat prevention, cybersecurity, security culture, physical protection, control and accounting procedures, and response capabilities.

TOP RADIOACTIVE SOURCE SECURITY ASSESSMENT FINDINGS AND RECOMMENDATIONS

Countries in the Radioactive Source Security Assessment did not receive scores or ranks. **To address the overall finding that the international architecture for radiological security is extremely weak, countries should bolster the global radiological architecture by ratifying key international agreements, by making political commitments to the IAEA Code of Conduct and related Supplemental Guidance, and by participating in voluntary initiatives.**

The Radioactive Source Security Assessment includes four additional high-level findings and recommendations.

- **Most countries do not have the national regulatory regimes in place to secure and control radioactive sources and protect them from theft and unauthorized use.** Countries should establish the national legal framework necessary to effectively regulate and control radioactive sources, including an oversight body and requirements to secure radioactive sources.
- **Most countries do not have adequate regulatory requirements for tracking and controlling the movement of radioactive sources, both nationally and transnationally, so that only authorized recipients receive and possess radioactive sources.** Countries should put in place national measures to track and control the movement of radioactive sources domestically and internationally, to prevent them from falling into the wrong hands.

- **Countries are ill-equipped to regulate and control radioactive sources in their country at all stages of their life cycles, from production, manufacture, use, and transport to disposition.** Countries should establish regulatory measures and practices to track materials throughout their life cycles and follow relevant IAEA guidance on end-of-life management.
- **Very few countries have made public commitments to replace high-activity radioactive sources with alternative technology, and there is varying capacity around the world to implement and sustain the technology's use.** Countries should commit to replacing high-activity radioactive sources with alternative technologies where possible. They should work to identify and address challenges to adopting alternative technology and to share information that can help other countries adopt these technologies, if they have the capacity to do so.

This report highlights key trends in global nuclear security and offers a host of recommendations for improvements at the country level and for ways to build a more effective global nuclear security architecture. It also provides rankings, country-level data, and detailed findings from the new Radioactive Source Security Assessment.

More information, including data to download in Excel models, is available at **www.ntiindex.org**.

Results Tables

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

THEFT: SECURE MATERIALS

OVERALL SCORE

Rank / 22		Score / 100	Change since 2018	Change since 2012
1	Australia	93	+1	+15
=2	Canada	87	0	+20
=2	Switzerland	87	+3	+12
4	Germany	85	+3	+16
=5	Netherlands	82	+1	+12
=5	Norway	82	+4	+11
7	Belgium	80	+3	+17
8	Japan	77	-1	+27
=9	United Kingdom	76	0	+8
=9	United States	76	0	+10
11	Italy	75	0	+15
=12	France	69	-1	+10
=12	Kazakhstan	69	+1	+14
=14	Belarus	65	0	+6
=14	China	65	0	+20
=16	Israel	57	0	+10
=16	Russia	57	+1	+6
=16	South Africa	57	+1	0
19	Pakistan	47	+7	+17
20	India	41	0	+8
21	Iran	33	0	+2
22	North Korea	19	+1	-3

1. QUANTITIES AND SITES

Rank / 22		Score / 100	Change since 2018	Change since 2012
1	Switzerland	95	0	+20
2	Australia	94	0	-1
=3	Iran	89	0	0
=3	Norway	89	0	-5
=5	Belarus	75	0	-6
=5	South Africa	75	0	-6
=7	Belgium	72	0	+11
=7	Canada	72	0	+5
=7	Germany	72	0	+5
=7	Kazakhstan	72	0	+5
=11	Italy	70	0	-6
=11	Netherlands	70	0	-5
13	Israel	47	0	0
14	Japan	42	-6	+18
=15	China	33	0	0
=15	France	33	0	-11
=15	North Korea	33	0	-18
18	United States	25	0	0
=19	India	19	0	0
=19	Pakistan	19	0	0
=19	Russia	19	0	-6
22	United Kingdom	14	0	0

2. SECURITY AND CONTROL MEASURES

Rank / 22		Score / 100	Change since 2018	Change since 2012
1	United Kingdom	96	0	+15
2	United States	89	0	+6
3	Canada	88	0	+24
4	Australia	87	0	+25
=5	China	80	0	+39
=5	Germany	80	0	+25
7	Italy	76	0	+23
8	Belgium	75	+8	+30
=9	Japan	74	0	+19
=9	Netherlands	74	0	+23
=11	Belarus	72	0	+18
=11	Switzerland	72	0	+6
13	Russia	70	0	+17
14	France	64	0	+4
=15	Kazakhstan	57	0	+14
=15	Pakistan	57	+25	+41
17	Norway	47	0	+9
=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 2020 are shown.
All countries are scored 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 2018	Change since 2012
=1	Australia	96	+4	+33
=1	Japan	96	+2	+31
=1	United States	96	-2	+34
4	Norway	94	+4	+31
5	Belgium	93	0	+30
=6	Canada	92	0	+34
=6	Germany	92	0	+22
=6	United Kingdom	92	0	+18
9	Switzerland	87	+4	+29
=10	Kazakhstan	85	0	+26
=10	Netherlands	85	0	+15
12	France	84	0	+31
13	Italy	83	0	+31
14	China	72	-2	+23
15	India	67	0	+28
16	Russia	56	+2	+4
17	Israel	54	-3	+21
18	South Africa	52	+2	0
19	Belarus	47	0	+10
20	Pakistan	45	+1	+9
21	Iran	27	0	+9
22	North Korea	0	0	0

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 22		Score / 100	Change since 2018	Change since 2012
=1	Australia	100	0	+11
=1	Canada	100	0	+27
=1	France	100	0	+22
=1	Germany	100	+11	+11
=1	Italy	100	0	+22
=1	Japan	100	0	+69
=1	Netherlands	100	0	+16
=1	Norway	100	+11	+16
=1	Russia	100	0	+5
=1	Switzerland	100	+11	+11
=1	United Kingdom	100	0	0
=1	United States	100	0	+22
=13	Israel	95	0	+27
=13	Kazakhstan	95	0	+16
=15	Belgium	89	0	+11
=15	China	89	0	+15
=15	Pakistan	89	0	+16
=18	Belarus	78	0	+5
=18	South Africa	78	0	0
20	India	36	0	0
21	Iran	5	0	0
22	North Korea	0	0	0

5. RISK ENVIRONMENT

Rank / 22		Score / 100	Change since 2018	Change since 2012
1	Norway	94	+2	+3
2	Switzerland	88	0	-4
3	Australia	87	0	-2
4	Canada	83	0	+4
=5	Germany	81	+3	+13
=5	Netherlands	81	+2	+2
7	Japan	75	0	0
8	United Kingdom	73	+5	+10
9	Belgium	71	+2	-7
10	France	66	-6	+3
11	United States	63	+4	-10
12	South Africa	53	+4	+3
=13	Belarus	48	-2	-1
=13	Israel	48	-1	+5
15	China	44	+4	+18
16	Italy	41	+4	+1
17	India	39	+1	+7
18	Kazakhstan	36	+6	+7
19	North Korea	34	+5	+3
20	Russia	29	+3	+5
21	Iran	18	-1	-1
22	Pakistan	16	0	+9

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
=1	New Zealand	98	0	+18
=1	Sweden	98	+1	+16
3	Finland	95	-2	+13
=4	Denmark	92	+3	+9
=4	South Korea	92	+1	+20
=6	Hungary	90	-1	+17
=6	Spain	90	0	+14
=8	Czech Republic	89	0	+14
=8	Poland	89	-2	+18
10	Singapore	88	0	+37
11	Lithuania	87	+4	+15
12	United Arab Emirates	86	-3	+14
=13	Chile	85	0	+22
=13	Romania	85	0	+16
=15	Jordan	84	0	+25
=15	Mexico	84	0	+25
17	Slovenia	83	-2	+7
18	Luxembourg	80	0	+7
19	Austria	79	+1	+3
=20	Armenia	78	0	+17
=20	Slovakia	78	+1	+5
=20	Ukraine	78	-1	+12
=23	Argentina	77	-3	+18
=23	Estonia	77	+3	+9
25	Philippines	76	-2	+24
=26	Indonesia	75	+1	+26
=26	Latvia	75	+2	+6
=26	Nigeria	75	0	+36
=29	Croatia	74	+3	+13
=29	Morocco	74	-1	+22
=31	Iceland	73	+1	+3
=31	Ireland	73	-2	0
=31	Malta	73	-1	+12
=34	Cyprus	72	+2	+5
=34	Georgia	72	+4	+32
=36	Bulgaria	71	+3	+3
=36	Cuba	71	+2	+5
=36	Paraguay	71	0	+20
=36	Portugal	71	-2	+1

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2018	Change since 2012
=1	Finland	100	0	+26
=1	Georgia	100	+6	+49
=1	Hungary	100	0	+43
=1	Mexico	100	0	+49
=1	New Zealand	100	0	+37
=1	Poland	100	0	+37
=1	South Korea	100	0	+37
=1	Spain	100	0	+32
=1	Sweden	100	0	+37
=1	Ukraine	100	0	+32
=11	Czech Republic	94	0	+31
=11	Denmark	94	+5	+26
=11	Jordan	94	0	+37
=11	Lithuania	94	+6	+31
=11	Morocco	94	0	+43
=11	Nigeria	94	0	+60
=11	Romania	94	0	+31
=18	Armenia	89	0	+32
=18	Chile	89	0	+38
=20	Indonesia	88	+6	+48
=20	United Arab Emirates	88	-6	+20
22	Philippines	83	-6	+32
=23	Thailand	82	+17	+48
=23	Vietnam	82	0	+59
25	Singapore	77	0	+43
=26	Argentina	76	-6	+25
=26	Slovenia	76	-5	+13
28	Turkey	70	-6	+30
29	Algeria	69	-6	+23
=30	Bosnia and Herzegovina	68	0	+22
=30	Croatia	68	+5	+11
=30	Paraguay	68	0	+28
=30	Slovakia	68	0	+11
34	Malaysia	65	0	+31
35	Luxembourg	64	0	+18
=36	Austria	63	0	+6
=36	Azerbaijan	63	+6	+17
=36	Bahrain	63	0	+12
=36	Bulgaria	63	+6	+6

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
=1	Albania	100	0	0
=1	Argentina	100	0	+9
=1	Armenia	100	0	+9
=1	Austria	100	0	0
=1	Azerbaijan	100	0	+66
=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	Macedonia	100	0	+17
=1	Malta	100	0	+26
=1	Mexico	100	0	+9
=1	Moldova	100	0	+26
=1	New Zealand	100	0	0
=1	Philippines	100	0	+26
=1	Poland	100	0	+9
=1	Portugal	100	0	0
=1	Romania	100	0	0
=1	Serbia	100	0	0
=1	Singapore	100	0	+57
=1	Slovakia	100	0	0
=1	Slovenia	100	0	0
=1	South Korea	100	0	0

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2018	Change since 2012
1	Singapore	95	0	+3
2	New Zealand	94	+3	+5
=3	Iceland	91	+7	+3
=3	Sweden	91	+3	-3
5	Luxembourg	86	+3	-5
6	Barbados	85	+7	+4
7	Austria	82	+2	0
8	Finland	81	-6	+8
9	Seychelles	80	+11	+18
=10	Denmark	77	0	-11
=10	Taiwan	77	+2	+8
=12	Bahamas	76	+2	0
=12	Estonia	76	+2	+16
=14	Botswana	75	+2	0
=14	Brunei	75	+2	-1
16	Slovenia	74	+2	+4
17	Bhutan	73	0	+15
18	Cape Verde	72	+3	+1
19	Uruguay	71	+3	+4
20	South Korea	70	+4	+13
=21	Chile	69	0	0
=21	Ireland	69	+2	0
=21	Malta	69	-4	-4
=21	Qatar	69	+10	+3
=21	Slovakia	69	+6	-1
=26	Czech Republic	67	+2	0
=26	Latvia	67	+8	+12
=28	Malaysia	66	0	+9
=28	Mauritius	66	0	0
=28	United Arab Emirates	66	-1	+10
31	Costa Rica	64	0	-9
32	Portugal	63	+2	-3
33	Cuba	62	-1	-9
34	Namibia	61	+1	+2
35	Hungary	60	-3	-10
=36	Lithuania	59	+6	+2
=36	Spain	59	0	-3
38	Poland	58	-6	-2
39	Senegal	57	+6	+12

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
40	Turkey	70	-4	+15
=41	Bosnia and Herzegovina	69	+1	+12
=41	Ghana	69	-1	+17
=43	Azerbaijan	68	+3	+30
=43	Moldova	68	0	+12
45	Greece	67	+1	0
=46	Brazil	66	+2	+6
=46	Montenegro	66	+2	+12
=46	Serbia	66	+3	+7
=46	Uruguay	66	+1	+12
=50	Albania	65	-6	+9
=50	Algeria	65	-3	+12
=50	Jamaica	65	+3	+14
=50	Macedonia	65	0	+11
=50	Uzbekistan	65	+4	+18
55	Costa Rica	64	-2	+8
=56	Namibia	63	-3	+13
=56	Peru	63	-1	+12
=56	Qatar	63	+3	+11
=59	Botswana	62	-2	+11
=59	Mongolia	62	+1	+5
=59	Senegal	62	+4	+18
=59	Taiwan	62	+1	+10
63	Bahrain	61	0	+8
=64	Seychelles	60	+3	+4
=64	Vietnam	60	0	+32
=66	Malaysia	59	0	+24
=66	Saudi Arabia	59	0	+28
=66	Tajikistan	59	0	+10
=69	Kuwait	58	+1	+30
=69	Mauritania	58	-2	+9
=71	Burkina Faso	57	+2	+13
=71	Ecuador	57	-1	+13
=71	Mali	57	+1	+8
=71	Niger	57	0	+8
=75	Côte d'Ivoire	56	0	+37
=75	Gabon	56	0	+5
=75	Kenya	56	+1	+1
=75	Thailand	56	+9	+25

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2018	Change since 2012
=36	Cyprus	63	+6	+17
=36	Estonia	63	+6	+12
=36	Latvia	63	0	+6
=36	Libya	63	+6	+12
=36	Moldova	63	0	+6
=36	Montenegro	63	+6	+23
=36	Panama	63	+12	+12
=36	Uzbekistan	63	+6	+17
48	Ireland	58	-5	+1
=49	Albania	57	-11	+17
=49	Bangladesh	57	+6	+11
=49	Brazil	57	+6	+17
=49	Cambodia	57	+11	+17
=49	Cuba	57	+6	+17
=49	Ghana	57	0	+11
=49	Greece	57	0	0
=49	Iraq	57	-6	+40
=49	Kenya	57	0	0
=49	Kyrgyz Republic	57	0	+23
=49	Macedonia	57	0	+11
=49	Madagascar	57	0	+17
=49	Malta	57	0	+11
=49	Peru	57	0	+17
=49	Portugal	57	-6	+6
=49	Saudi Arabia	57	0	+11
=49	Senegal	57	+6	+28
=49	Serbia	57	+6	+11
=67	Colombia	52	0	+12
=67	Qatar	52	0	+23
=69	Côte d'Ivoire	51	0	+34
=69	Dominican Republic	51	0	+5
=69	Gabon	51	0	+5
=69	Kuwait	51	0	+17
=69	Mali	51	0	+5
=69	Mauritania	51	0	0
=69	Niger	51	0	+5
=69	Tajikistan	51	0	+11
=69	Turkmenistan	51	0	0
=69	Uruguay	51	0	+17

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
=1	Spain	100	0	0
=1	Sweden	100	0	0
=1	Taiwan	100	0	+17
=1	Tajikistan	100	0	+17
=1	Turkey	100	0	+9
=1	Ukraine	100	0	+9
=1	United Arab Emirates	100	0	+9
=1	Uzbekistan	100	0	+26
=48	Burkina Faso	91	0	+17
=48	Chile	91	0	+17
=48	Congo (Dem. Rep. of)	91	0	0
=48	Costa Rica	91	0	+17
=48	Ecuador	91	0	+17
=48	Guatemala	91	0	0
=48	Mali	91	0	+17
=48	Mauritania	91	0	+34
=48	Mongolia	91	0	+8
=48	Montenegro	91	0	0
=48	Namibia	91	0	+8
=48	Nicaragua	91	0	+8
=48	Nigeria	91	0	+25
=48	Paraguay	91	0	+17
=48	Peru	91	0	+8
=48	Uganda	91	0	+25
=64	Algeria	83	0	+9
=64	Botswana	83	0	+17
=64	Côte d'Ivoire	83	0	+74
=64	Indonesia	83	0	+9
=64	Kenya	83	0	+9
=64	Niger	83	0	+9
=64	Tanzania	83	0	+9
=64	Tunisia	83	0	+9
=64	Uruguay	83	0	+9
=73	Afghanistan	74	0	0
=73	Bahrain	74	0	+8
=73	Bangladesh	74	0	-9
=73	Cameroon	74	0	+8
=73	Cape Verde	74	0	+17
=73	Gabon	74	0	+8

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2018	Change since 2012
=40	Cyprus	56	-3	-8
=40	Jamaica	56	+9	+13
=40	Mongolia	56	+2	+11
=43	Georgia	55	+3	+20
=43	Ghana	55	-2	+6
45	Rwanda	54	+5	+10
=46	Guyana	53	+4	+9
=46	Kuwait	53	+7	+13
=46	São Tomé and Príncipe	53	+10	+18
=49	Belize	52	+5	+1
=49	Croatia	52	0	-2
=49	Trinidad and Tobago	52	+4	+12
=52	Bulgaria	51	+2	+2
=52	Romania	51	-1	+8
=52	Vietnam	51	0	0
=55	Oman	50	+3	+14
=55	Panama	50	+5	+11
=55	Paraguay	50	0	+6
=55	Swaziland	50	+2	+7
=59	Argentina	49	-1	+14
=59	Egypt	49	0	+15
=59	Suriname	49	+1	-1
62	Colombia	48	0	+13
=63	Fiji	47	+4	+5
=63	Gambia	47	+11	+12
=63	Jordan	47	+2	+14
=63	Lesotho	47	+2	-7
=63	Samoa	47	+4	+5
=63	Solomon Islands	47	+4	+5
=63	Tonga	47	+4	+5
=63	Vanuatu	47	+4	+5
=71	Sri Lanka	45	+2	+5
=71	Zambia	45	-1	-4
=73	Bahrain	44	0	+2
=73	Gabon	44	+2	0
=73	Greece	44	+3	-2
=73	Saudi Arabia	44	0	+12
=73	Thailand	44	+4	+2
=78	Dominican Republic	43	0	+8

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
=79	Bangladesh	55	+2	+4
=79	Tunisia	55	-1	+4
81	Guatemala	53	+1	+4
82	Nicaragua	52	0	+4
=83	Panama	51	+6	+10
=83	Tanzania	51	+1	+6
=85	Congo (Dem. Rep. of)	50	+2	+1
=85	Uganda	50	-4	+8
=87	Cameroon	49	+1	+10
=87	Rwanda	49	+2	+3
89	Cape Verde	48	+1	+5
=90	Colombia	46	0	+12
=90	Kyrgyz Republic	46	0	+18
=92	Dominican Republic	44	0	+10
=92	Lebanon	44	0	-3
=92	Madagascar	44	0	+10
=92	Mozambique	44	0	+1
96	Afghanistan	43	0	+5
=97	Malawi	42	0	+19
=97	Zambia	42	+5	+20
=99	El Salvador	41	0	+5
=99	Swaziland	41	+1	+15
=101	Cambodia	40	+6	+10
=101	Lesotho	40	-2	+9
=101	Mauritius	40	0	+6
=101	Turkmenistan	40	-1	+2
105	Iraq	39	-6	+24
=106	Bolivia	38	+3	+11
=106	Djibouti	38	+1	+17
108	Sri Lanka	37	+1	+6
109	Benin	36	+13	+19
=110	Fiji	35	+1	-1
=110	Honduras	35	+1	+10
=110	Libya	35	+3	+2
113	Oman	33	+1	+8
=114	Bahamas	32	+1	0
=114	Barbados	32	+2	+4
=116	Egypt	30	-3	+11
=116	Ethiopia	30	0	+10

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2018	Change since 2012
=69	Zambia	51	+11	+34
=80	Afghanistan	46	0	+12
=80	Benin	46	+29	+35
=80	Burkina Faso	46	+6	+12
=80	Cameroon	46	0	+18
=80	Costa Rica	46	-5	+12
=80	Ecuador	46	0	+12
=80	El Salvador	46	0	+6
=80	Iceland	46	0	+6
=80	Jamaica	46	0	+6
=80	Lesotho	46	-5	+6
=80	Malawi	46	0	+17
=80	Mongolia	46	0	0
=80	Namibia	46	-5	+23
=80	Swaziland	46	0	+12
=80	Tunisia	46	0	+6
=95	Bolivia	40	+6	+17
=95	Botswana	40	-6	+11
=95	Central African Republic	40	0	0
=95	Congo (Dem. Rep. of)	40	0	0
=95	Djibouti	40	0	+17
=95	Fiji	40	0	0
=95	Guatemala	40	0	+6
=95	Lebanon	40	0	0
=95	Nicaragua	40	0	+6
=95	Seychelles	40	0	0
=105	Comoros	34	0	0
=105	Honduras	34	0	+6
=105	Mozambique	34	0	0
=105	Myanmar	34	0	+23
=105	Oman	34	0	+6
=105	Sri Lanka	34	0	0
=105	Sudan	34	+6	+11
=105	Tanzania	34	0	+5
=105	Togo	34	0	+11
=105	Uganda	34	-6	+5
=105	Yemen	34	0	+11
=116	Burundi	29	0	+6
=116	Chad	29	+12	+12

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
=73	Kuwait	74	0	+65
=73	Lebanon	74	0	0
=73	Morocco	74	0	+8
=73	Qatar	74	0	0
=73	Rwanda	74	0	0
=73	Saudi Arabia	74	0	+65
=73	Senegal	74	0	+8
=73	Seychelles	74	0	0
87	Mozambique	66	0	+9
=88	Ethiopia	43	0	+26
=88	Georgia	43	0	+17
=88	Iraq	43	0	+26
=88	Kyrgyz Republic	43	0	+26
=88	Malawi	43	0	+43
=88	Malaysia	43	0	+26
=94	Bolivia	34	0	+8
=94	Colombia	34	0	+8
=94	Djibouti	34	0	+25
=94	Dominican Republic	34	0	+17
=94	El Salvador	34	0	+8
=94	Honduras	34	0	+17
=94	Madagascar	34	0	+17
=94	Mauritius	34	0	+17
=94	Panama	34	0	+8
=94	Sierra Leone	34	0	+17
=94	Solomon Islands	34	0	+17
=94	Sri Lanka	34	0	+17
=94	Syria	34	0	+17
=94	Turkmenistan	34	0	+8
=94	Venezuela	34	0	0
=94	Vietnam	34	0	+17
=110	Barbados	26	0	+9
=110	Cambodia	26	0	+9
=110	Central African Republic	26	0	+17
=110	Egypt	26	0	+9
=110	Laos	26	0	+9
=110	Lesotho	26	0	+26
=110	Myanmar	26	0	+9
=110	Swaziland	26	0	+26

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2018	Change since 2012
=78	Indonesia	43	-4	+7
=78	Tanzania	43	+2	+2
=81	Benin	42	0	+5
=81	Montenegro	42	0	+8
=81	Timor-Leste	42	-3	+6
=84	Brazil	41	-2	-6
=84	Guinea-Bissau	41	+5	+5
=86	El Salvador	40	+1	0
=86	Moldova	40	+2	+6
=86	Peru	40	-2	+7
=86	Serbia	40	0	+5
90	Albania	39	-1	+7
=91	Azerbaijan	38	0	+9
=91	Bolivia	38	0	0
=91	Liberia	38	+5	+2
=91	Niger	38	0	+13
=91	Tunisia	38	-6	-5
=96	Djibouti	37	+2	+4
=96	Ethiopia	37	-1	-1
=96	Laos	37	-3	0
=99	Algeria	36	-2	-6
=99	Honduras	36	+4	+9
=99	Morocco	36	-3	-2
=99	Mozambique	36	+1	-4
=99	Nepal	36	+1	+13
=104	Burkina Faso	35	-3	+10
=104	Ecuador	35	-4	+10
=104	Macedonia	35	-3	+2
=104	Malawi	35	-1	-5
=104	Mexico	35	0	+1
=104	Papua New Guinea	35	+2	+3
=104	Sierra Leone	35	+2	+9
=111	Angola	34	0	-4
=111	Côte d'Ivoire	34	+3	-1
=111	Togo	34	+5	+10
=111	Turkey	34	-6	-4
=115	Armenia	33	0	+1
=115	Comoros	33	+1	-4
=115	Guinea	33	+6	+13

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
=116	Myanmar	30	-1	+15
=116	Solomon Islands	30	+1	+7
=120	Comoros	29	0	+4
=120	Sierra Leone	29	0	+10
=120	Togo	29	+1	+10
=123	Central African Republic	28	0	+2
=123	Trinidad and Tobago	28	+1	+2
=125	Laos	27	-1	+5
=125	Tonga	27	+1	+1
=127	Bhutan	26	0	+4
=127	Brunei	26	0	-1
=127	Guyana	26	+1	+2
=127	Sudan	26	+2	+8
131	Vanuatu	25	+1	+7
=132	Nepal	24	+2	+8
=132	Venezuela	24	+2	+2
=134	Burundi	23	0	+7
=134	Congo (Brazzaville)	23	-1	+15
=134	Guinea-Bissau	23	+1	+4
=137	Gambia	22	+3	+6
=137	Haiti	22	0	+3
=137	Liberia	22	+9	+11
=140	Belize	21	+1	0
=140	Guinea	21	+1	+8
=140	São Tomé and Príncipe	21	+3	+10
=140	Syria	21	+6	+10
=140	Timor-Leste	21	-1	+7
=145	Chad	20	+5	+8
=145	Samoa	20	+2	+2
=145	Suriname	20	0	0
=145	Zimbabwe	20	+2	+9
149	Yemen	18	0	+4
=150	Angola	16	0	-1
=150	Papua New Guinea	16	0	+3
152	Equatorial Guinea	15	+1	+3
153	Eritrea	13	+1	+1
154	Somalia	7	+3	+6

3. GLOBAL NORMS

Rank / 154		Score / 100	Change since 2018	Change since 2012
=116	Rwanda	29	0	0
=116	Taiwan	29	0	+6
120	Mauritius	28	0	0
=121	Bahamas	23	0	0
=121	Congo (Brazzaville)	23	0	+23
=121	Egypt	23	-5	+12
=121	Guinea-Bissau	23	0	0
=121	Guyana	23	0	0
=121	Haiti	23	0	0
=121	Laos	23	0	+6
=121	Liberia	23	+17	+17
=121	Nepal	23	+6	+6
=121	Sierra Leone	23	0	+6
=121	Syria	23	+12	+12
=121	Venezuela	23	+6	+12
=121	Zimbabwe	23	+6	+12
=134	Cape Verde	17	0	0
=134	Ethiopia	17	0	+6
=134	Guinea	17	0	0
=134	Solomon Islands	17	0	0
=134	Tonga	17	0	0
=134	Trinidad and Tobago	17	0	0
=140	Angola	11	0	0
=140	Equatorial Guinea	11	0	0
=140	Gambia	11	0	0
=140	Vanuatu	11	0	+11
=144	Barbados	6	0	0
=144	Belize	6	0	0
=144	Bhutan	6	0	0
=144	Brunei	6	0	0
=144	Papua New Guinea	6	0	0
=144	Samoa	6	0	0
=144	São Tomé and Príncipe	6	0	0
=144	Somalia	6	+6	+6
=144	Suriname	6	0	0
=144	Timor-Leste	6	0	0
154	Eritrea	0	0	0

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2012
=110	Thailand	26	0	+9
=110	Timor-Leste	26	0	+17
=110	Tonga	26	0	0
=110	Trinidad and Tobago	26	0	0
=110	Vanuatu	26	0	0
=110	Zambia	26	0	+17
=124	Belize	17	0	0
=124	Benin	17	0	+8
=124	Bhutan	17	0	0
=124	Brunei	17	0	0
=124	Burundi	17	0	+17
=124	Comoros	17	0	+17
=124	Congo (Brazzaville)	17	0	+17
=124	Eritrea	17	0	+8
=124	Fiji	17	0	-9
=124	Gambia	17	0	+8
=124	Guinea	17	0	+17
=124	Haiti	17	0	+8
=124	Libya	17	0	0
=124	Nepal	17	0	+8
=124	Oman	17	0	+8
=124	Papua New Guinea	17	0	+8
=124	Samoa	17	0	0
=124	São Tomé and Príncipe	17	0	+17
=124	Sudan	17	0	+8
=124	Suriname	17	0	0
=124	Togo	17	0	+8
=124	Zimbabwe	17	0	+17
=146	Angola	9	0	0
=146	Bahamas	9	0	0
=146	Chad	9	0	+9
=146	Equatorial Guinea	9	0	+9
=146	Guinea-Bissau	9	0	+9
=146	Guyana	9	0	0
=146	Liberia	9	0	+9
=146	Somalia	9	0	+9
=146	Yemen	9	0	0

5. RISK ENVIRONMENT

Rank / 154		Score / 100	Change since 2018	Change since 2012
=115	Madagascar	33	+1	-11
=115	Philippines	33	0	+7
120	Bosnia and Herzegovina	31	+2	-5
=121	Congo (Brazzaville)	30	-4	-1
=121	Eritrea	30	+2	-6
=121	Mauritania	30	-6	-5
=121	Uganda	30	-6	-8
125	Guatemala	29	+1	+4
=126	Equatorial Guinea	28	+2	+2
=126	Haiti	28	+1	+3
=126	Kyrgyz Republic	28	-1	-1
=126	Myanmar	28	-3	+7
=126	Turkmenistan	28	-1	0
=126	Uzbekistan	28	+5	+10
=132	Bangladesh	27	-4	+6
=132	Cambodia	27	+2	+1
=132	Nicaragua	27	0	-3
135	Mali	26	+5	+2
136	Cameroon	24	+1	-4
=137	Kenya	22	+2	-8
=137	Nigeria	22	+2	+7
=137	Tajikistan	22	-3	-2
=140	Burundi	21	+2	0
=140	Sudan	21	-1	+2
142	Zimbabwe	18	-2	-6
=143	Chad	17	0	-1
=143	Congo (Dem. Rep. of)	17	+6	+4
=143	Lebanon	17	+1	-9
=146	Ukraine	14	-3	-16
=146	Venezuela	14	-2	-13
148	Central African Republic	11	+2	-9
149	Somalia	9	+2	+5
150	Libya	8	+3	-12
=151	Afghanistan	3	0	0
=151	Iraq	3	-11	-8
=153	Syria	0	0	-3
=153	Yemen	0	0	-4

Overall and category scores and ranks for 2020 are shown.
All countries are scored 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 2018	Change since 2016
1	Australia	92	+1	+11
2	Canada	90	0	+9
3	Finland	89	0	+4
4	United Kingdom	88	+1	+7
=5	Germany	84	+3	+12
=5	Hungary	84	-1	+6
=7	Netherlands	83	+1	+8
=7	United States	83	0	+6
=9	Czech Republic	82	+1	+7
=9	Japan	82	+1	+6
=9	Romania	82	+1	+3
=9	Sweden	82	+1	+7
=9	Switzerland	82	+3	+10
=14	Norway	81	+3	+10
=14	Slovenia	81	+2	+8
16	Belgium	80	+3	+6
17	Poland	78	0	+6
=18	France	77	-1	+3
=18	South Korea	77	0	+7
=18	United Arab Emirates	77	n/a	n/a
21	Bulgaria	75	+8	+11
=22	China	74	+1	+19
=22	Spain	74	0	+8
24	Slovakia	73	+4	+7
=25	Indonesia	69	0	+7
=25	Kazakhstan	69	+1	+13
27	Argentina	68	-2	+6
28	Armenia	67	0	+6
29	Ukraine	65	0	+8
30	Russia	64	+1	+4
31	Israel	61	-1	+5
32	Chile	60	+2	+8
33	Pakistan	58	+5	+12
34	Morocco	57	+1	+8
35	South Africa	56	+1	0
36	Uzbekistan	55	+2	+5
37	Mexico	54	+1	+11
=38	India	53	0	+7
=38	Jordan	53	n/a	n/a
=38	Taiwan	53	0	+2
41	Peru	52	+1	+4
42	Brazil	47	0	+1
43	Bangladesh	45	+1	+8
44	Algeria	42	-2	+2
45	Egypt	40	-2	+5
46	Iran	21	0	+1
47	North Korea	17	+1	+1

1. NUMBER OF SITES

Rank / 47		Score / 100	Change since 2018	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	n/a	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	n/a	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	Slovakia	80	0	0
=17	South Africa	80	0	0
=32	Belgium	60	0	0
=32	Canada	60	0	0
=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
=41	China	40	0	0
=41	Germany	40	0	0
=41	United Kingdom	40	0	0
=44	France	20	0	0
=44	Japan	20	0	0
=44	Russia	20	0	0
47	United States	0	0	0

2. SECURITY AND CONTROL MEASURES

Rank / 47		Score / 100	Change since 2018	Change since 2016
1	United Kingdom	95	0	+11
2	United States	88	0	+3
=3	Australia	87	0	+26
=3	Canada	87	0	+10
5	Finland	86	+3	+5
6	Hungary	83	0	0
7	Romania	80	0	0
8	China	79	0	+36
=9	Bulgaria	77	+16	+20
=9	Germany	77	0	+10
11	Czech Republic	74	0	+9
12	Japan	73	0	+2
13	Belgium	72	+9	+11
=14	Netherlands	69	0	+5
=14	Slovenia	69	+4	+6
=14	Switzerland	69	0	0
17	Taiwan	68	+2	+4
18	Russia	67	0	0
=19	South Korea	66	0	+4
=19	Ukraine	66	0	+7
=21	Poland	65	+4	+4
=21	United Arab Emirates	65	n/a	n/a
=23	Armenia	63	0	+8
=23	Sweden	63	0	+2
25	France	59	0	0
=26	Pakistan	56	+15	+22
=26	Slovakia	56	+4	+4
28	Spain	55	0	+6
=29	Indonesia	53	0	0
=29	Kazakhstan	53	0	+10
31	India	52	0	+7
32	Norway	49	0	+4
33	Jordan	46	n/a	n/a
=34	Argentina	45	0	0
=34	Peru	45	0	0
36	Brazil	43	+7	+7
37	Uzbekistan	41	0	0
38	South Africa	40	0	0
39	Israel	36	0	0
40	Chile	35	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 2020 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 2018	Change since 2016
1	France	97	0	+13
=2	Australia	94	+4	+13
=2	Canada	94	0	+16
=2	Japan	94	+3	+16
=2	Mexico	94	+3	+23
=2	Poland	94	0	+13
=2	Sweden	94	0	+16
=2	Ukraine	94	0	+19
=2	United States	94	-3	+10
10	Belgium	93	0	+13
=11	Norway	91	0	+16
=11	United Kingdom	91	0	+13
13	Romania	90	+6	+15
=14	Finland	88	-3	+10
=14	Germany	88	0	+19
=14	South Korea	88	-3	+10
17	Indonesia	86	+4	+21
=18	Hungary	85	-3	+10
=18	Kazakhstan	85	0	+14
=18	Netherlands	85	0	+10
=18	Spain	85	0	+13
=22	Chile	84	0	+17
=22	China	84	0	+13
=22	Czech Republic	84	0	+16
=22	Switzerland	84	+5	+30
26	United Arab Emirates	83	n/a	n/a
=27	India	81	0	+12
=27	Jordan	81	n/a	n/a
=29	Morocco	78	+4	+19
=29	Slovenia	78	+3	+12
31	Argentina	76	-4	+11
32	Armenia	74	-3	+10
33	Russia	64	+3	0
34	Slovakia	63	+6	+6
35	Algeria	60	-4	0
=36	Brazil	59	-2	-3
=36	Bulgaria	59	+4	+4
=36	Israel	59	-4	+10
39	Pakistan	58	0	+9
40	Peru	56	-3	+3
41	South Africa	51	0	-3
42	Bangladesh	50	+4	+8
43	Uzbekistan	47	+3	+3
44	Egypt	29	-4	+9
45	Taiwan	22	-3	-3
46	Iran	14	0	+4
47	North Korea	0	0	0

4. DOMESTIC COMMITMENTS AND CAPACITY

Rank / 47		Score / 100	Change since 2018	Change since 2016
=1	Argentina	100	0	+16
=1	Australia	100	0	0
=1	Bulgaria	100	+11	+16
=1	Canada	100	0	+5
=1	Czech Republic	100	0	0
=1	Finland	100	0	0
=1	France	100	0	0
=1	Germany	100	+11	+11
=1	Hungary	100	0	+16
=1	Indonesia	100	0	+15
=1	Israel	100	0	+21
=1	Japan	100	0	0
=1	Kazakhstan	100	0	+21
=1	Netherlands	100	0	+10
=1	Norway	100	+11	+16
=1	Romania	100	0	0
=1	Russia	100	0	+10
=1	Slovakia	100	0	+11
=1	Slovenia	100	0	+11
=1	Spain	100	0	+5
=1	Switzerland	100	+11	+16
=1	United Kingdom	100	0	0
=1	United States	100	0	+11
=24	Armenia	89	0	+5
=24	Belgium	89	0	0
=24	China	89	0	+15
=24	Morocco	89	0	+15
=24	Pakistan	89	0	+11
=24	Poland	89	0	+5
=24	South Korea	89	0	+5
=24	Sweden	89	0	+5
=24	United Arab Emirates	89	n/a	n/a
=24	Uzbekistan	89	0	+15
34	Bangladesh	84	0	+21
=35	South Africa	78	0	0
=35	Ukraine	78	0	+5
37	Egypt	67	0	+15
=38	Chile	58	+11	+16
=38	Mexico	58	0	+21
=38	Peru	58	+11	+16
41	Taiwan	42	0	0
=42	Algeria	36	0	+10
=42	Brazil	36	0	+5
=42	India	36	0	+5
=42	Jordan	36	n/a	n/a
46	Iran	15	0	+10
47	North Korea	0	0	0

5. RISK ENVIRONMENT

Rank / 47		Score / 100	Change since 2018	Change since 2016
=1	Norway	94	+2	+5
=1	Sweden	94	+5	+8
3	Switzerland	88	0	-3
4	Australia	87	0	+3
5	Canada	83	0	+3
6	Finland	82	-2	+1
=7	Germany	81	+3	+11
=7	Netherlands	81	+2	+7
9	Slovenia	77	+1	+6
10	Taiwan	76	-2	+3
11	Japan	75	0	+5
12	Slovakia	74	+4	+5
13	United Kingdom	73	+5	+6
=14	Belgium	71	+2	-3
=14	United Arab Emirates	71	n/a	n/a
=16	Czech Republic	69	+1	+1
=16	South Korea	69	+1	+9
=18	France	66	-6	0
=18	Hungary	66	0	-2
20	Spain	64	+2	+12
=21	Chile	63	-1	-1
=21	United States	63	+4	+2
23	Poland	61	-4	+2
24	Bulgaria	57	+1	+3
=25	Argentina	55	-3	+2
=25	Romania	55	-1	0
27	South Africa	53	+4	+3
28	Israel	48	-1	-10
29	Brazil	47	-4	-2
=30	China	44	+4	+7
=30	Morocco	44	-3	-4
32	Jordan	40	n/a	n/a
=33	Egypt	39	-5	-3
=33	India	39	+1	+6
=33	Mexico	39	+1	+3
36	Peru	37	-4	-1
=37	Indonesia	36	-5	-3
=37	Kazakhstan	36	+6	+12
39	North Korea	34	+5	+8
40	Uzbekistan	32	+3	+2
41	Algeria	31	-2	-2
=42	Armenia	29	+1	+1
=42	Russia	29	+3	+8
44	Bangladesh	21	-2	+5
45	Iran	18	-1	-13
46	Pakistan	16	0	+2
47	Ukraine	14	-2	0

Overall and category scores and ranks for 2020 are shown. All countries are scored 0–100, where 100 = most favorable nuclear security conditions.
= denotes tie in rank.

RADIOLOGICAL

NATIONAL MEASURES			
		No or no data available	Yes
Regulatory Oversight	Does the country maintain a radioactive source regulatory oversight body?	19%	81%
Security Measures	Are there regulations that require security measures to be in place to protect radioactive sources?	44%	56%
State Registry	Does the state maintain a registry of radioactive sources?	64%	36%
Inspection Authority	Does the state have authority to inspect facilities with radioactive sources?	49%	51%
Export Licenses	Are there licensing requirements for exporting IAEA Category 1 sources?	55%	45%

GLOBAL NORMS			
		No	Yes
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?	22%	78%
	Has the state notified the IAEA of their intent to abide by the Guidance on the Import and Export of Radioactive Sources?	32%	68%
	Has the state nominated a Point of Contact to facilitate imports and exports of radioactive source material?	19%	81%
	Has the state made available their responses to the IAEA Importing and Exporting States Questionnaire?	40%	60%
	Has the state notified the IAEA of their commitment to implement the Guidance on the Management of Disused Radioactive Sources?	79%	21%
International Participation	Does the state participate in the Global Initiative to Combat Nuclear Terrorism (GICNT)?	51%	49%
	Did the state send an official delegation to the 2018 International Conference on the Security of Radioactive Material?	59%	41%
International Conventions	Is the country a state party to the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)?	39%	61%
	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?	54%	46%
	Is the country a state party to the Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency?	40%	60%

RADIOLOGICAL *(cont'd)*

COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES

		No	Yes
Intent	Has the state subscribed to INFCIRC/910?	82%	18%

		No or no data available	Yes
Implementation	Has the country publicly declared a regulatory requirement, policy, or commitment to implementing alternative technology to replace high-activity radioactive sources?	94%	6%

		No data available	Frequent power outages (80th–99th percentile)	60th–79th percentile	40th–59th percentile	20th–39th percentile	Infrequent power outages (0–19th percentile)
Capacity	What is the average percentage of businesses experiencing power outages each month?	26%	15%	15%	15%	14%	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)
	What percentage of the population over 25 holds a tertiary degree or higher?	39%	13%	12%	13%	12%	13%

RISK ENVIRONMENT

		No data available	Very high	High	Moderate	Low	Very low
Political Stability	What is the risk of significant social unrest during the next two years?	4%	8%	24%	39%	19%	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
	How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?	5%	16%	23%	18%	22%	15%

		No data available	Very high	High	Moderate	Low	No threat
	Is there a risk that international disputes/ tensions will negatively affect the polity during the next two years?	5%	11%	19%	32%	30%	3%

RADIOLOGICAL *(cont'd)*

		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
Political Stability	Is this country presently subject to armed conflict, or is there at least a moderate risk of such conflict during the next two years?	5%	6%	8%	10%	30%	42%
		No data available	**Very high**	**High**	**Moderate**	**Low**	**Very low**
	Are violent demonstrations or violent civil/labor unrest likely to occur during the next two years?	5%	7%	20%	28%	33%	7%
		No data available	**Very low**	**Low**	**Moderate**	**High**	**Very high**
	How effective is the country's political system in formulating and executing policy?	54%	2%	13%	19%	11%	2%
	What is the quality of the country's bureaucracy and its ability to carry out government policy?	5%	18%	38%	26%	9%	5%
		No data available	**Very high**	**High**	**Moderate**	**Low**	**Very low**
Pervasiveness of Corruption	How pervasive is corruption among public officials?	5%	23%	30%	22%	12%	10%
		No data available	**Very high**	**High**	**Moderate**	**Low**	**Very low**
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%	6%	6%	24%	39%	21%
	How likely is organized crime to be a problem for government and/or business?	0%	10%	19%	31%	32%	8%
	How many firearms were seized during the interdiction of illicit weapons trafficking?	51%	10%	10%	10%	10%	10%

About the Nuclear Security Index

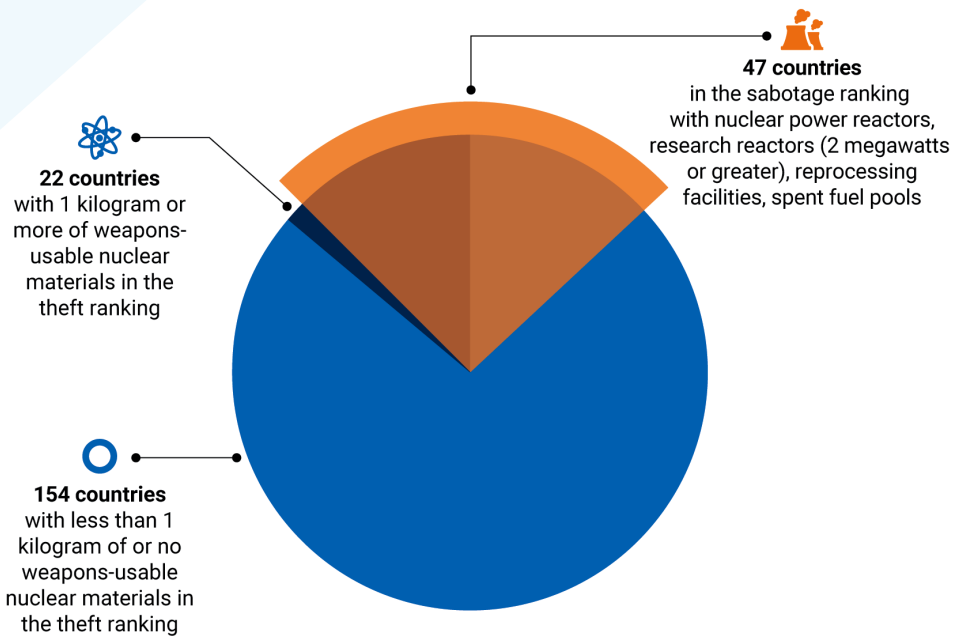
The NTI Index is a groundbreaking assessment of nuclear security conditions in countries around the world. It promotes actions to strengthen nuclear security and build confidence, and it highlights progress and trends over time. Published biennially since 2012, the NTI Index includes two theft rankings 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 materials against theft
- **Theft: Support Global Efforts**—A ranking of 153 countries and Taiwan[1] 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 nuclear facilities against sabotage

The NTI Index ... promotes actions to strengthen nuclear security and build confidence, and it highlights progress and trends over time.

[1] Taiwan is included in the theft ranking for countries without nuclear materials and the sabotage ranking. Given Taiwan's status, "About the Nuclear Security Index" describes the number of countries in the NTI Index as "153 countries and Taiwan" and "46 countries and Taiwan" in the theft and sabotage rankings, respectively. Further references to numbers of countries in the report and website include Taiwan. For more on how Taiwan is treated in the Index, see the full EIU methodology at www.ntiindex.org.

Figure 1: Countries in the NTI Index



WHY AN INDEX?

Nuclear materials that could be used to build a nuclear bomb are located in 22 countries around the world. And 154 other countries could serve as safe havens, staging grounds, or transit routes for illicit nuclear activities. Nuclear facilities that could be at risk of sabotage, leading to release of radioactive materials, exist in 47 countries.[2] Terrorist groups interested in committing acts of nuclear terrorism continue to pose risks around the world, and their capabilities continue to evolve. Constant vigilance by nuclear operators, governments, and international organizations will be needed to keep pace with evolving threats.

The international community has seen significant progress on nuclear security over the past two decades, including as a result of the Nuclear Security Summits. Since 2012, the NTI Index has identified significant gaps and challenges in global nuclear security and demonstrated that continued prioritization of nuclear security at national and international levels is critical for preventing potentially catastrophic outcomes.

The NTI Index was developed to promote country actions to strengthen nuclear security, track progress, identify nuclear security priorities, and build accountability. Keeping track of nuclear security is even more important now that the summits have ended. With the first three editions of the NTI Index timed for release before the 2012, 2014, and 2016 summits, the NTI Index was able to track progress, including actions taken to fulfill summit commitments, in an era when global leadership and political attention on nuclear security were at their highest levels.

In the absence of the driving force of the summits, the NTI Index can serve a much-needed forcing function for continued progress by highlighting evolutions in best practices and priorities, raising red flags where gaps and challenges remain unaddressed, and promoting action and accountability. The NTI Index also provides an assessment of the health, sustainability, and comprehensiveness of the global nuclear security architecture, including the International Atomic Energy Agency (IAEA) and international treaties.

[2] Belarus is preparing to launch its new nuclear power reactor now that the initial fuel load has been delivered. The fuel delivery was completed after research for the 2020 edition of the NTI Index closed and therefore was not included in this year's sabotage ranking. It will be added to the sabotage ranking in the next edition of the NTI Index.

DEVELOPMENT OF THE INDEX

The Economist Intelligence Unit (EIU) 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 on-the-ground security but rather assesses national-level actions, such as the comprehensiveness of a country's regulatory framework, its commitment to global norms, and its participation in global initiatives.

Countries with weapons-usable nuclear materials and/or nuclear facilities have an opportunity to review and comment on the NTI Index data before the Index is published so that it is as accurate and up-to-date 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, 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 details on p. 75).

THE FRAMEWORKS

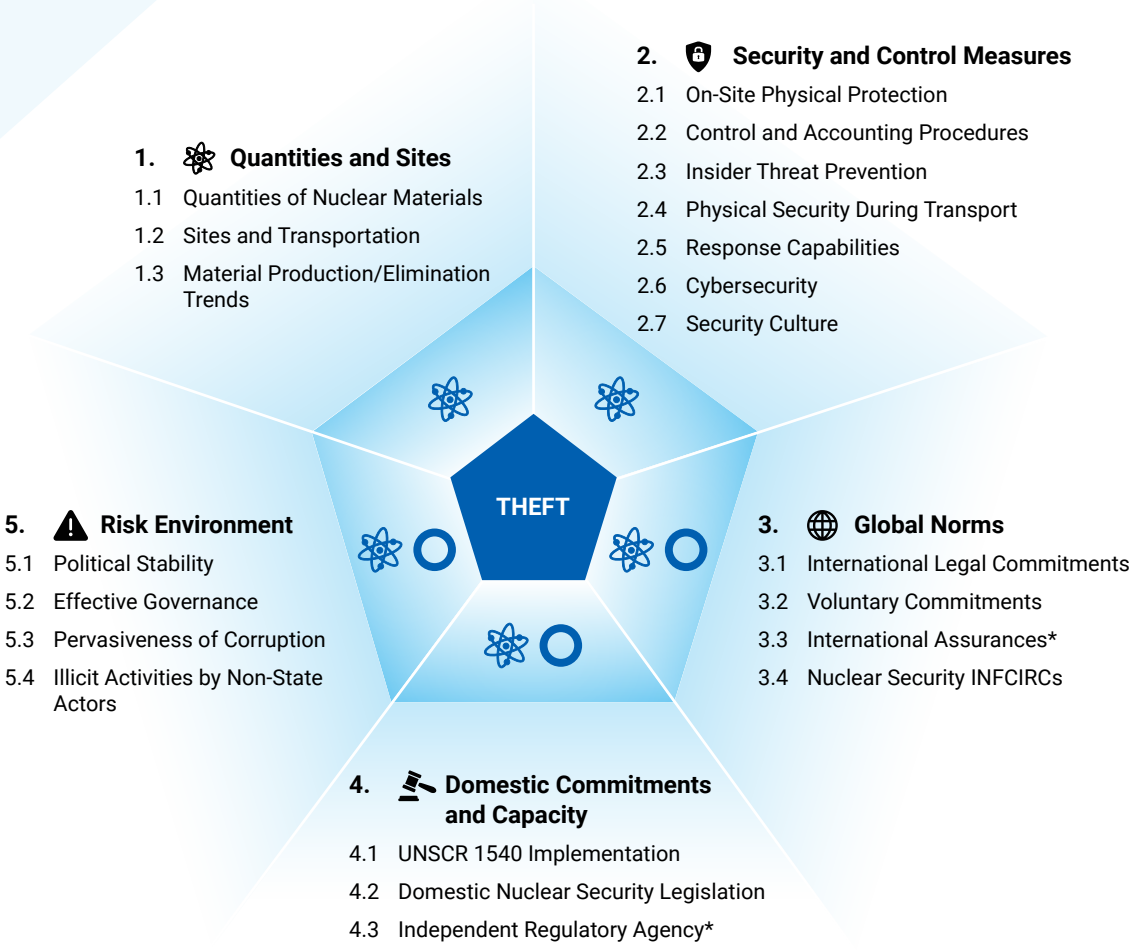
The frameworks for the three rankings differ slightly from each other but, in general, include a variety of factors that impact a country's nuclear security conditions:

- **Quantities and Sites:** This category captures the quantity of nuclear materials, the number of sites, and the frequency of transport in a particular country, all related to the risk that materials could be stolen. In addition, it includes a leading indicator as to whether the country is increasing or decreasing its overall material quantities. This category is not included in the theft ranking for countries without materials. The sabotage ranking looks at only the number of sites, not quantities of material.
- **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 without materials.
- **Global Norms:** This category includes actions that contribute to the establishment of global norms for nuclear materials security. It includes important international legal commitments, voluntary participation in a number of global initiatives, international assurances, and nuclear security information circulars (INFCIRCs).
- **Domestic Commitments and Capacity:** This category includes actions that indicate how well a country has implemented its international commitments and a country's 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 (CPPNM), and the presence of an independent regulatory agency.
- **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's ability to implement effective security and regulatory oversight.

Countries are scored on a scale of 0 to 100, where 100 is the top 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. A low score is between 0 and 33, a medium score is between 34 and 66, and a high score is between 67 and 100.

The NTI Index assesses the risk of theft of weapons-usable nuclear materials and the risk of sabotage of nuclear facilities. It does not assess a country's actions related to smuggling and illicit trafficking, non-proliferation, or disarmament.

Figure 2: How the Theft Ranking Measures Nuclear Security Conditions



The theft ranking assesses countries with weapons-usable nuclear materials based on these five categories. Countries without materials are assessed on three categories.

KEY

Countries with weapons-usable nuclear materials

Countries without weapons-usable nuclear materials

*This indicator does not apply to countries without nuclear materials.

Note: For information about data sources used for scoring, see the full EIU Methodology at www.ntiindex.org.

Figure 3: How the Sabotage Ranking Measures Nuclear Security Conditions

The sabotage ranking assesses countries with nuclear facilities based on these five categories.

Note: For information about data sources used for scoring, see the full EIU Methodology at www.ntiindex.org.

Radioactive sources in teletherapy devices could be stolen and used to build dirty bombs.

IMPORTANT NEW ELEMENTS IN 2020

For the 2020 edition, NTI took a fresh approach to the NTI Index to account for progress on nuclear security and new tools available to address risks. Among the key changes across all three rankings are the following:

- In areas where most countries excelled, questions were adjusted to raise the bar to promote continuous improvement.
- New indicators were added to the rankings for countries with nuclear materials and/or nuclear facilities to reflect newer priorities, such as Security Culture. Existing high-priority indicators, such as Insider Threat Prevention and Cybersecurity, were strengthened by adding new subindicators.
- Credit is given to countries that use new tools for nuclear security cooperation and confidence building. For example, those actions include subscribing to nuclear security INFCIRCs, publishing reports from IAEA International Physical Protection Advisory Service (IPPAS) missions, and publicly reporting on nuclear security progress.
- Key elements of the international architecture, such as the IAEA and the amended CPPNM, are given higher prominence by adding new subindicators. Those subindicators include (a) participation in IAEA activities such as the Incident and Trafficking Database and the Nuclear Security Guidance Committee, (b) representation at the IAEA International Conference on Nuclear Security at the ministerial level, and (c) submission of information to the IAEA on laws and regulations as required by the amended CPPNM.

Also new in 2020 is a first-of-its-kind Radioactive Source Security Assessment, released in conjunction with the NTI Index. It assesses national measures in 176 countries to prevent a dirty bomb. (See the chapter on the Radioactive Source Security Assessment on p. 64 for more detail.)

ADDITIONAL RESOURCES

The NTI Index website (www.ntiindex.org) has several resources for users depending on their interests. This report is available for download, along with a more detailed EIU methodology. All data are available for download in interactive data models, which include underlying scores as well as tools to better understand the data.

Detailed country profiles are also available in the interactive data models and on the website to offer a deeper dive into a country's performance. The website includes an interactive tool that simulates a country's scores if it were to take recommended actions.

Nuclear Security Index: Findings and Recommendations

In addition to the country highlights below, NTI developed ten recommendations based on the findings for the three NTI Index rankings. For each finding, see detailed data highlights and a set of recommendations for country action. Further detail on scores and ranks is available in downloadable Excel models at www.ntiindex.org.

COUNTRY HIGHLIGHTS

Among countries with weapons-usable nuclear materials, Australia ranks first for the fifth time. It also ranks first in the sabotage ranking for the third time. Despite its repeated position at the top of the ranking, Australia continues to better its score, improving by +1 in both rankings.

Among countries with weapons-usable nuclear materials, Canada and Switzerland tie for second, Germany is fourth, and the Netherlands and Norway tie for fifth. Among countries with nuclear facilities in the sabotage ranking, Canada, Finland, and the United Kingdom rank second, third, and fourth, respectively, and Germany and Hungary are tied for fifth.

New Zealand and Sweden tie for first in the theft ranking for countries without weapon-usable nuclear materials, followed by Finland (third), Denmark and South Korea (tied for fourth), and Hungary and Spain (tied for sixth).

Pakistan was the most improved country in the theft ranking for countries with materials, improving its overall score by 7 points.

Findings and recommendations on pages 36–63 are relevant to the rankings indicated by the symbols shown.

Theft: Secure Materials

Theft: Support Global Efforts

Sabotage: Protect Facilities

OVERALL FINDING

Progress to secure nuclear materials and nuclear facilities has slowed significantly in the past two years, and high-level political attention on nuclear security has waned.

The job of nuclear security is never finished. Non-state actors and terrorist groups are still interested in acquiring the nuclear materials to make a nuclear bomb. The terrorist threat is becoming even more unpredictable as self-radicalized individuals draw inspiration from extremist organizations and operate under the radar of intelligence organizations. Cyber threats also are growing.

Despite the evolving threat, the Index results for all three rankings show that progress has slowed significantly in the past two years.

The NTI Index showed substantial improvements in national regulatory structures and a strengthened global nuclear security architecture between 2012 and 2018. Countries are still taking actions to strengthen regulations and support global norms, but since 2018, the number of countries improving their score in the Index has declined and the amount by which countries' scores have improved has decreased. The rate of decline does not reflect that there is less work to do. Significant gaps remain, including in important areas such as cybersecurity, international assurances, and efforts to make treaties universal. Countries at the top of the rankings also still need to address weaknesses in their regulatory structures; all countries, no matter how well they perform in the Index, should focus on continuous improvement and avoid complacency.

The decline in the rate of improvement may indicate that without the driving force of the Nuclear Security Summits or any similar milestone, attention on nuclear security has waned, leading to slowed progress. The political will and sense of accountability that arose from the summits were vital to driving actions in governments to strengthen nuclear security. The improvements captured between 2012 and 2018 coincided with the summits and in many cases reflected commitments made or progress announced at the summits. Not only has the rate of progress slowed after the last summit in 2016, as indicated by fewer improvements in this year's Index, but the summits' influence on progress, as measured by the percentage of improvements that can be linked to summit-related activities, has also begun to decline.

DATA HIGHLIGHTS

Several metrics show that while countries are improving overall, progress has slowed. (See Figures 4, 5, and 6.)

- Using the median score as a metric, countries' overall scores continue to increase in all three rankings.
- The number of countries with improved scores has declined since 2018 in all three rankings, showing that progress has slowed. The number of countries with worsening scores has increased since 2018 in all three rankings.
- The average amount that a score improved has declined in all three rankings compared with previous years, showing that even countries that are improving are taking fewer actions.

RECOMMENDATION

To drive country action and progress in nuclear security, countries must sustain political attention on nuclear security.

- Greater effort is needed to strengthen and sustain political attention on nuclear security and to make continued progress in improving national regulatory frameworks and building an effective global nuclear security architecture.
- Countries should take advantage of upcoming conferences and meetings to increase attention and accountability by sending high-level delegations and using such opportunities to report on progress and

Figure 4: Trends in Overall Score: Countries with Materials

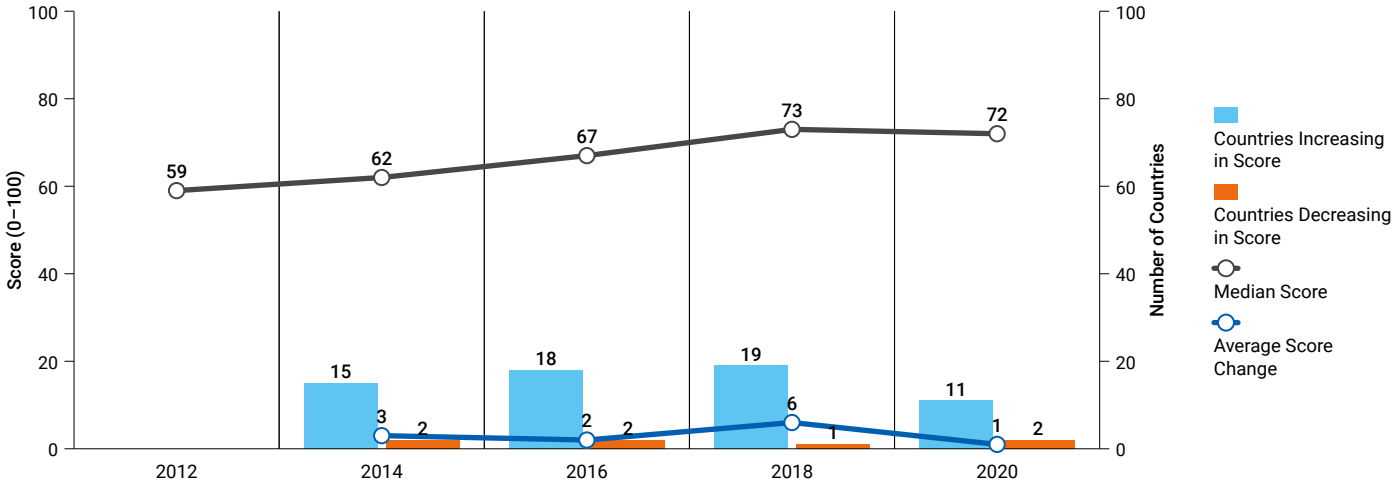


Figure 5: Trends in Overall Score: Countries without Materials

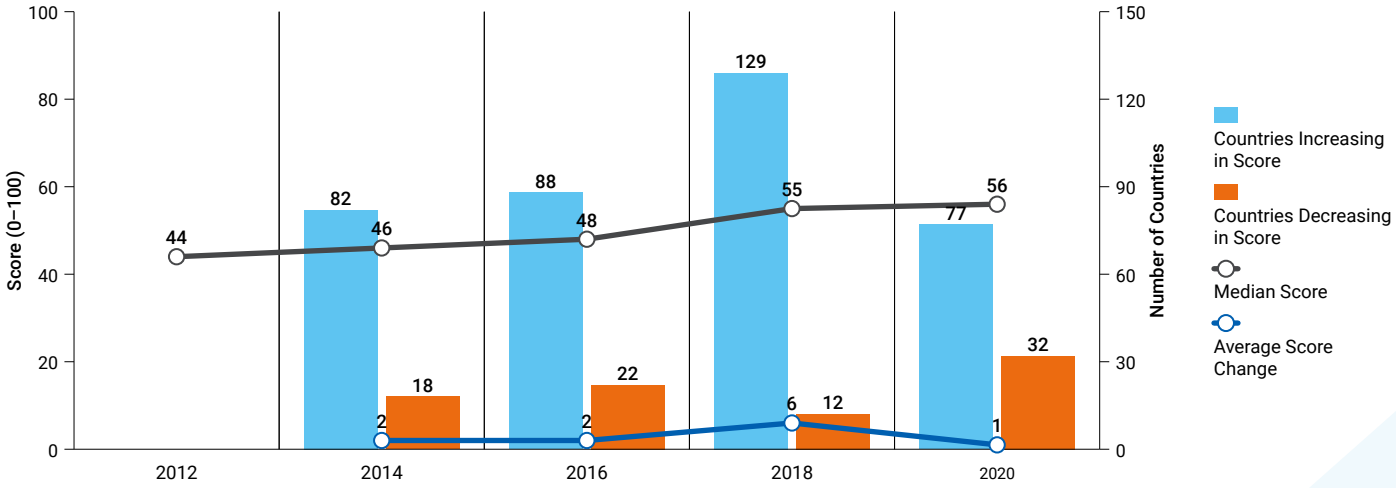
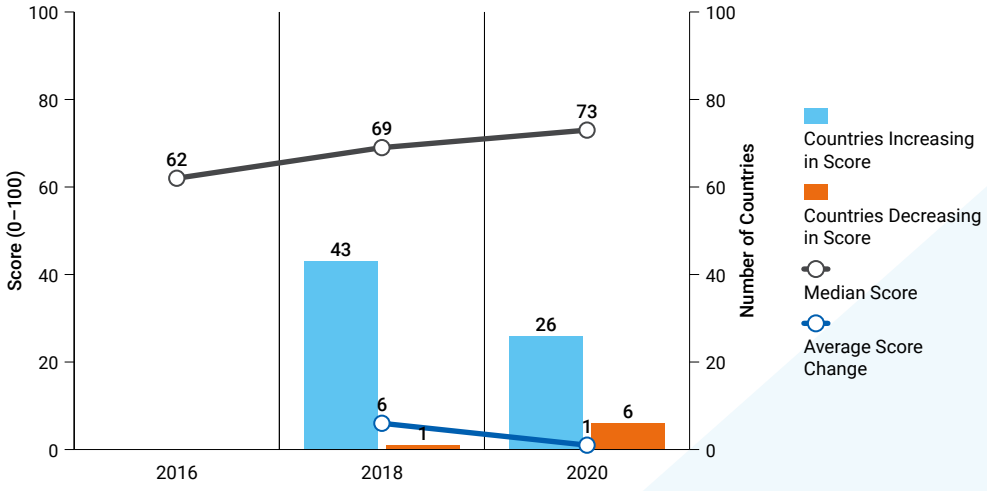
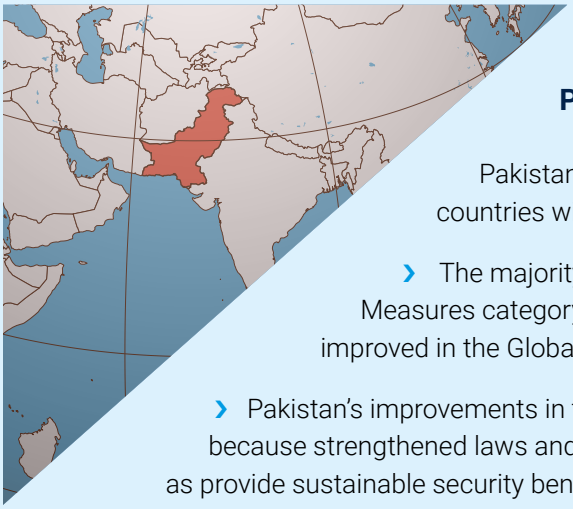


Figure 6: Trends in Overall Score: Countries with Nuclear Facilities



make new commitments. Upcoming opportunities include the 2021 review of the amended Convention on the Physical Protection of Nuclear Material (CPPNM), the next International Atomic Energy Agency (IAEA) International Conference on Nuclear Security (ICONS) in 2024, and smaller venues such as annual meetings of the Global Initiative to Combat Nuclear Terrorism, the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, and the IAEA General Conference.

- High-level political attention is also needed to generate actions at the national level to strengthen domestic nuclear security. Senior government officials should place nuclear security high on national agendas to demonstrate to regulators, policymakers, and operators that nuclear security is a priority. Senior officials should also incorporate nuclear security into high-level discussions with their counterparts from other countries to try to galvanize political attention elsewhere.



PERFORMANCE ON THE RANKINGS: PAKISTAN MOST IMPROVED

Pakistan was the most improved country in the theft ranking for countries with nuclear materials, improving its overall score by 7 points.

- The majority of Pakistan's improvements are in the Security and Control Measures category (+25) because of its passage of new regulations. Pakistan also improved in the Global Norms category (+1).

- Pakistan's improvements in the Security and Control Measures category are significant because strengthened laws and regulations result in durable boosts in Pakistan's score as well as provide sustainable security benefits.

- Pakistan has steadily improved in the Security and Control Measures category over time with the passage of new regulations, improving by +8 in 2014, +2 in 2016, and +6 in 2018. Its score in 2014 improved owing to new regulations for on-site physical protection. In 2016, it passed new cybersecurity regulations. In 2018, it improved its insider threat protections. Its newest regulations mark a much larger shift. Compared with other countries' score improvements in the Security and Control Measures category, Pakistan's increase of +25 is the second-largest improvement of any country since the Index first launched in 2012.

FINDING

No countries have eliminated their stocks of weapons-usable nuclear materials since 2016, and the number of countries with these materials has plateaued.

The more weapons-usable nuclear materials that are in the world, the greater is the risk of theft. Countries that completely eliminate their stocks of weapons-usable nuclear materials—whether through reactor conversions, highly enriched uranium (HEU) blend downs, or removal of materials to their country of origin—eliminate the risk of theft in their territory. Countries that reduce their quantities of materials, even if they do not eliminate them, are also reducing the risk of theft.

Between 2012 and 2016, there was a significant decline in the number of countries with 1 kilogram or more of weapons-usable nuclear materials. After 2016, the number of countries with materials plateaued, and it is unlikely to decrease further in the near future. Nine of the 22 countries have nuclear weapons, and the rest face political or technical challenges to eliminate their remaining stocks. Short of elimination, decreases in quantities of nuclear material also are slowing.

DATA HIGHLIGHTS

- The number of countries with 1 kilogram or more of weapon-usable nuclear materials in the NTI Index went down from 32 in 2012 to 22 in 2018. In 2020, there was no change.
- Six countries decreased their overall quantities of weapons-usable nuclear materials over the past four years. These small decreases were not significant enough to improve their score, however. Increasing the score for quantities of materials would require moving into a lower scoring band (e.g., from 5 to 20 kilograms of materials for a score of 7 to less than 5 kilograms for a score of 8).
- Four countries continue to increase their quantities: India, North Korea, Pakistan, and the United Kingdom.

RECOMMENDATION

The international community should revive efforts to reduce stocks of HEU and plutonium. Meanwhile, given the continued possession, use, and transport of weapons-usable nuclear materials, countries should focus on long-term, sustainable stewardship of their materials as long as they continue to possess them.

- More work is needed to address civilian stocks of nuclear materials in countries that continue to possess HEU or plutonium, including identifying and tackling technical and political challenges to further eliminations. Recent advances in new low-enriched uranium (LEU) fuels will allow additional research and test reactors to convert from HEU and provide more LEU fuel options for new research reactors. These developments will help eliminate the need for new HEU production. HEU holders could front-load domestic blend-down operations to reduce HEU in storage.
- Countries with plutonium should seek to reduce stockpiles to minimum levels necessary for energy purposes and to avoid new production that lacks near-term users. Forward movement on spent fuel storage will relieve pressure to separate additional plutonium.
- Countries that continue to possess weapons-usable nuclear materials should protect them to the highest levels and build public and international confidence in their security by publishing regulations and reports of progress, hosting peer reviews, and making declarations about quantities.
- Countries should focus on the tools necessary for long-term, sustainable stewardship of nuclear materials and technology, including building a strong security culture, boosting capacity through training and education, and strengthening the ability to mitigate cyber threats.

FINDING

Regulatory requirements for nuclear security are not comprehensive, with significant weaknesses in important areas such as insider threat prevention, security culture, and cybersecurity, leaving dangerous gaps and vulnerabilities around the world.

Security is only as strong as the weakest link. Theft of nuclear materials or sabotage of a nuclear facility anywhere in the world would have significant implications for all countries, including potential public backlash against the use of peaceful nuclear technology, such as nuclear energy. A comprehensive regulatory system in every country is necessary to effectively secure nuclear materials in possession, use, and transport and to allow for an effective response to an attack on a nuclear facility. Without robust regulatory requirements, operators of nuclear facilities will be left to implement security in an ad hoc way, leaving dangerous gaps and vulnerabilities around the world. Raising the level of security practice everywhere nuclear materials or nuclear facilities are located through strong regulations and application of minimum standards is vital to maintaining public support for peaceful nuclear technology.

Countries with nuclear materials and/or nuclear facilities have generally positive results in the Security and Control Measures category, with strong regulations for the indicators On-Site Physical Protection, Control and Accounting Procedures, Transport Security, and Response Capabilities; however, they have major weaknesses in the indicators Insider Threat Prevention, Security Culture, and Cybersecurity.

DATA HIGHLIGHTS

- Looking at how many countries receive a high score (67+) for each indicator in the Security and Control Measures category can indicate how strong each area is. Indicators with many countries scoring high for that indicator show an area of strength. Indicators with fewer countries scoring high for that indicator show an area of weakness. (See Figure 7.)
- On the basis of this metric, the strongest areas are Control and Accounting Procedures (78% of countries receive a high score for that indicator), Transport Security (77% of countries receive a high score for that indicator), Response Capabilities (61% of countries receive a high score for that indicator), and On-Site Physical Protection (53% of countries receive a high score for that indicator).
- In contrast, only 31% of countries receive a high score for Insider Threat Prevention, 24% of countries receive a high score for Cybersecurity, and 20% of countries receive a high score for Security Culture.
- These three areas also have the most zero scores and the least full scores. (See Figure 8.) Although no countries receive a score of zero for the indicators On-Site Physical Protection or Response Capabilities, 24% of countries receive a zero for Cybersecurity, 14% receive a zero for Security Culture, and 10% receive a zero for Insider Threat Prevention. Conversely, only 2% of countries receive a full score for Insider Threat Prevention, and only 4% receive a full score for Cybersecurity and Security Culture.

Figure 7: Percentage of Countries with High Scores (67–100) for Indicators in the Security and Control Measures Category

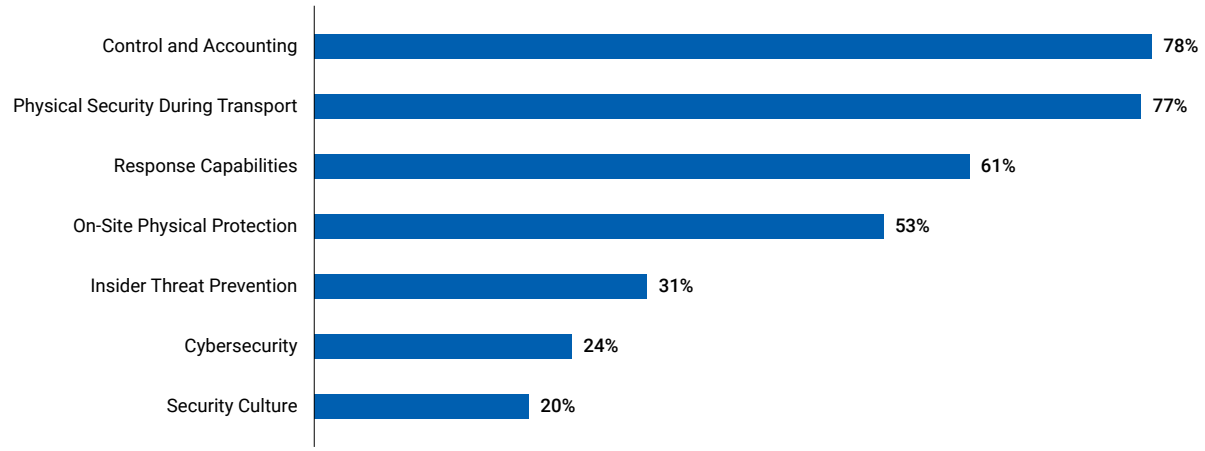
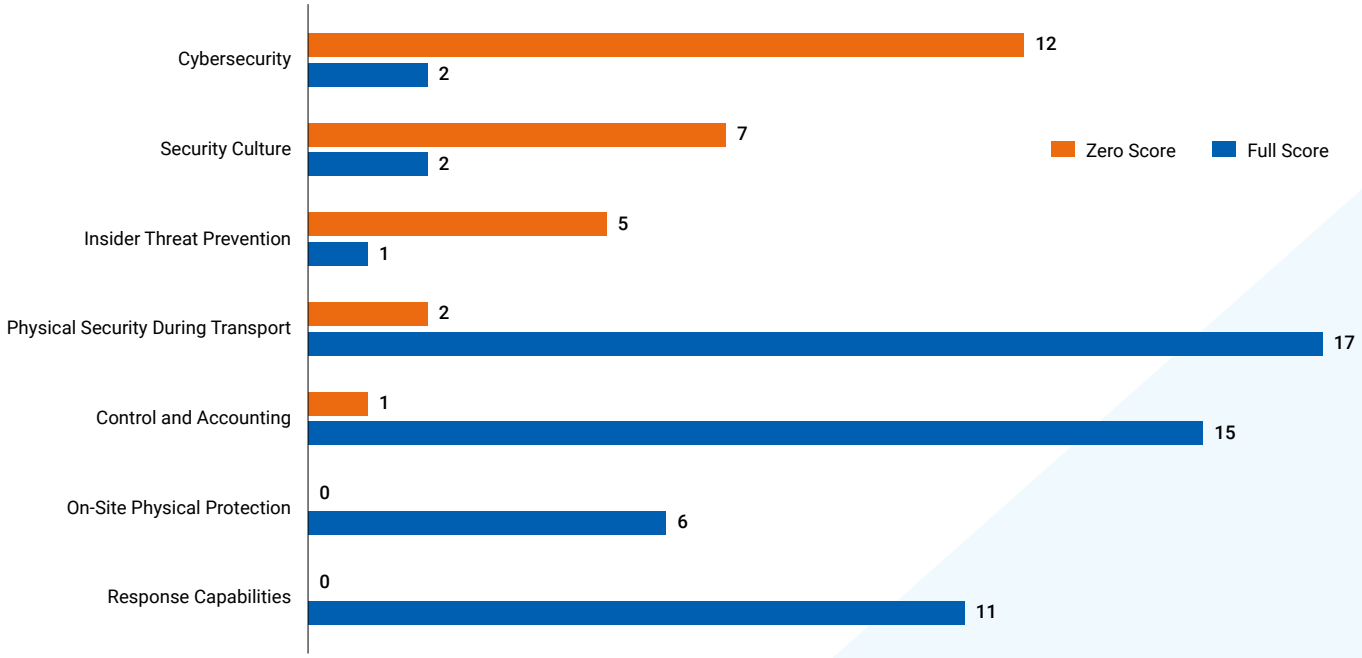


Figure 8: Number of Countries with a Full Score and a Zero Score for Indicators in the Security and Control Measures Category



RECOMMENDATION

Countries must strengthen their nuclear security regulatory regimes and strive for continuous improvement, particularly in areas necessary for long-term, sustainable nuclear stewardship, such as insider threat prevention, security culture, and cybersecurity.

- As risks, technology, and best practices evolve, countries' efforts to strengthen their security must continuously evolve and improve; countries should avoid becoming complacent about the threat.
- Countries should strengthen their regulatory regimes to improve security practices. Upgrades to regulations should be made regularly to reflect evolving best practices and promote continuous improvement.
- Countries can improve their security by sharing best practices, including through organizations such as the World Institute for Nuclear Security; requesting peer reviews from the IAEA or other countries; and participating in international workshops and conferences to help them improve. Countries that need to should also take advantage of the assistance available through the IAEA.
- Regulators should engage with their counterparts in other countries to share best practices and lessons learned in different regulatory environments.

FINDING

Countries do not have adequate measures in place to address the human factor of nuclear security. Weaknesses in insider threat prevention and security culture undermine security measures and can create new vulnerabilities.

The human factor—the professionals responsible for nuclear security and their attitudes, discipline, habits, training, and awareness—is vital to strong nuclear security implementation, but it is also one of the most difficult factors to control (see sidebar "Addressing the Human Factor: Insider Threats and Security Culture"). The NTI Index includes two indicators relevant to the human factor of nuclear security: Insider Threat Prevention and, for the first time in 2020, Security Culture.

Performance in both areas is weak. Although all known cases of fissile material theft have involved individuals with authorized access, countries still do not have adequate measures in place to protect against insider threats, such as robust and regular personnel vetting and insider threat awareness programs. Performance for Security Culture is the weaker of the two. Most countries have no regulatory requirements or incentives in place to strengthen nuclear security culture, including requirements that facilities perform security culture self-assessments. Many countries' regulations focus solely on safety culture, which is a well-established concept, or subsume security culture within safety culture.

ADDRESSING THE HUMAN FACTOR: INSIDER THREATS AND SECURITY CULTURE

Addressing the human factor is vital to strong nuclear security implementation. All known cases of fissile material theft have involved individuals with authorized access. Failing to control the human factor weakens all other security measures. Physical protection measures, control and accounting, and cybersecurity measures will be ineffective if an insider can bypass systems to steal material or sabotage a facility or assist someone else in doing so. Similarly, if alarm systems reveal a breach of a facility, they will be ineffective if the security culture is weak and guards fail to take those alarms seriously. Yet the human factor is one of the most difficult factors to control.

Insider Threat Prevention Remains Weak

Addressing insider threats requires regular personnel vetting, requirements to report suspicious behavior, and programs that build awareness among all personnel of the risks posed by insiders so that personnel can identify threats. Insider threat prevention continues to be one of the weakest areas in the Security and Control Measures category, with only 31% of countries with nuclear materials and/or nuclear facilities receiving a high score for the indicator, with 31% receiving a medium score, and with 39% receiving a low score.

The Addition of Security Culture

Security culture was introduced into the NTI Index framework in 2020 for the first time. Security culture requires security to be prioritized at all levels, from the regulator to the CEO of a nuclear energy company, from the staff at a facility to its security guards. This is a difficult concept to measure in an index. The new Security Culture indicator includes two new questions, as well as a third existing question that was moved from elsewhere in the Index.

- The first question asks whether the regulator mentions the phrase "security culture" in regulations or annual reports. Given the importance of security culture, the NTI Index took a strict approach for this question, only giving credit when security culture is referenced as a concept that is separate and distinct from safety culture. The Index does not give credit if a regulation merely states that references to safety culture include security culture. This is because failure of regulators to prioritize security culture sends a message to facilities that it is not a priority.
- The second question asks whether licensees or operators are required to conduct security culture self-assessments. Because security culture depends on what is happening at each facility, facilities also need to continuously assess the strength of their own security culture and take action to address weaknesses.
- The third question asks whether defined individuals are responsible for at least one aspect of security at a facility and whether they undergo additional training for that role. This question was included in previous editions but was moved to the new Security Culture indicator.

The scores for this new indicator show that significant efforts are needed to strengthen recognition of the importance of security culture around the world. Only two countries receive a full score for the new Security Culture indicator (Finland and Ukraine), while 20% of countries receive a high score, 29% receive a medium score, 51% receive a low score, and 14% receive a zero.

DATA HIGHLIGHTS

- Among the countries assessed, 35% require robust personnel vetting that includes drug tests, background tests, and psychological checks. Only 27% of countries require two of these checks, 18% require only one, and 20% do not require any of these tests, even though they are vital to identifying potential insider threats.
- Only 55% of countries require that personnel vetting be conducted regularly, not just at the beginning of a person's employment. Regular vetting can detect changes in an employee's personal circumstances that might pose new threats. Only 22% of countries require tests to occur every two years or less, a regularity that enables facilities to rapidly detect new threats.
- Only 18% of countries require an insider threat awareness program to build awareness and provide staff with the tools to help identify insider threats.
- The phrase "security culture" is referenced in regulations or annual reports as a concept separate and distinct from safety culture in only 41% of countries with materials and/or facilities. Failure to prioritize security culture at the national level means it is less likely that nuclear facility operators will prioritize it.
- Only 16% of countries require security culture assessments, which would help operators understand their own weaknesses and how to address them.

RECOMMENDATION

Regulatory requirements and nuclear operators should address the human factor through comprehensive measures for insider threat prevention and efforts to strengthen security culture.

- Countries should improve measures to identify and mitigate insider threats. This requires more stringent and more frequent personnel vetting, as well as enhanced surveillance of sensitive areas and mandatory reporting of suspicious behavior.
- Nuclear facilities should be required to have insider threat awareness programs to enhance the ability to detect and respond to insider threats. These programs build awareness among all personnel of the risks posed by insiders so that personnel can identify threats.
- Countries should put greater emphasis on security culture as distinct from safety culture in regulations and other regulatory documents and provide guidance to facilities to improve security culture. Regulators should set an example for nuclear facilities by prioritizing nuclear security culture at the national level.
- Security culture also depends on actions taken at facilities. Understanding security culture weaknesses at the facility is vital to strengthening security culture. Countries should require nuclear operators to conduct security culture assessments so that they can take into account weaknesses or other unique characteristics at the facility as they work to strengthen nuclear security. Nuclear facility operators should also continuously assess the strength of their own security culture and take action to address weaknesses.

ASSESSMENT OF THE GLOBAL NUCLEAR SECURITY ARCHITECTURE

An effective global nuclear security architecture to protect vulnerable nuclear materials and facilities remains elusive. In the absence of an effective system, progress that countries have made to reduce the risks of theft and sabotage will be in jeopardy, and it will be challenging for countries to build on that progress going forward.

The 2020 NTI Index finds that the global nuclear security architecture today is a patchwork of individual states' domestic regulations and policies, informal groups of countries voluntarily working together to enhance certain aspects of nuclear security, and more formal binding treaties and international organizations.

This patchwork reflects an ongoing lack of political will to effectively connect these elements and to empower multilateral structures.

A truly effective system must include the following characteristics. A review of the current architecture shows that these characteristics are not yet fully incorporated.

Comprehensive: All weapons-usable nuclear materials and facilities should be covered by the system, including materials outside civilian programs (or "military materials").

The security of military materials is almost exclusively handled at the national level in the nine countries that possess them, making this one of the biggest weaknesses of the existing architecture. Because of the sensitivity of nuclear weapons to these countries' national security, most international nuclear security instruments only address nuclear material in peaceful use. United Nations Security Council Resolution (UNSCR) 1540 contains a general obligation to apply "appropriate effective physical protection measures" for nuclear weapons and "related materials," but leaves the details to each country. The amended Convention on the Physical Protection of Nuclear Material (CPPNM) mentions the importance of securing military materials, but only in the non-binding preamble. Similarly, the four Nuclear Security Summit communiqués acknowledge that states should "maintain at all times effective security of all nuclear and other radioactive material, including nuclear materials used in nuclear weapons."[1] In addition, only two countries—the United States and the United Kingdom—have made declarations about their military material stocks.

Standards and Best Practices: All states and facilities holding weapons-usable nuclear materials should adhere to international standards and best practices.

The existing architecture has no binding international standards or best practices that all countries follow, making this another weakness. The only binding standards are at the national regulatory level, but as the NTI Index shows, regulations are uneven both in content and in implementation. A number of tools and incentives exist to strengthen nuclear security implementation around the world, but they are no substitute for commonly applied binding standards. The recommendations of the International Atomic Energy Agency (IAEA), while detailed, are non-binding and applied selectively. The amended CPPNM, the only binding treaty requiring protection of nuclear materials and facilities, provides some specificity through "fundamental

continued on page 46

[1] See Nuclear Security Summit 2016 Communiqué, available at www.nss2016.org/.

Assessment of the Global Nuclear Security Architecture (continued)

principles," but contains no verification or enforcement measures and is far from universal. The only universal obligation to protect nuclear materials found in UNSCR 1540 is vague. Informal collectives such as the Nuclear Suppliers Group and countries subscribing to Information Circular 869 have promoted greater acceptance of the IAEA's recommendations but have limited memberships and are unlikely to change the recommendations' voluntary nature. The World Institute for Nuclear Security has promoted a valuable set of best practices for implementing nuclear security, but these also are voluntary.

Confidence Building: States should help build confidence in the effectiveness of their security practices and should take reassuring actions to demonstrate that all nuclear materials and facilities are secure.

This once-weak aspect of the architecture has strengthened over time, with increasing acceptance of the value of confidence building and recognition that nuclear security in any given country affects not only its citizens, but also its neighbors and even countries and populations far away. One way to build confidence is for countries to share information about their nuclear security practices through regulations, annual reports, or nuclear security progress reports. Information can be shared at treaty review conferences, through mandatory reporting; annual meetings; regular or special-purpose high-level events; and working-level and expert meetings held by international organizations. In addition, informal collectives can provide venues for information exchange and reporting on nuclear security progress, and peer reviews also help build confidence.

Minimize and Eliminate: States should work to reduce risk through minimizing or, where feasible, eliminating weapons-usable nuclear material stocks and the number of locations where they are found.

This aspect of the architecture, after growing in strength, seems to have weakened. For the first time in a decade of producing the Index, no countries with 1 kilogram or more of highly enriched uranium (HEU) or plutonium have removed or disposed of all of their stocks. Conversely, four countries are increasing their holdings of these materials, whether for weapons production or in connection with peaceful nuclear activities. Despite advocacy and support for minimization and elimination efforts by international organizations, informal groupings, and some countries, actions to minimize and to eliminate nuclear materials have slowed, in some cases owing to technical and political barriers. Although the norm in favor of phasing out civilian HEU use is still strong, there is no similar norm for ending plutonium production.

FINDING

Cybersecurity regulations are slowly adapting to the growing cyber threat to nuclear facilities, but the adoption of these requirements continues to trail the urgency of the threat.

Cyber attacks against a nuclear facility could facilitate the theft of nuclear materials or an act of sabotage against a nuclear facility. This year's scores show a mix of good and bad news for managing cybersecurity risks. Since 2016, when the NTI Index first measured cybersecurity, countries with weapons-usable nuclear materials and/or nuclear facilities have slowly improved their scores in cybersecurity. However, countries are still not sufficiently prepared to mitigate or respond to cyber attacks, a worrying finding given the rapid pace with which cyber threats evolve.

The number of countries with a basic regulatory requirement to protect nuclear facilities against cyber attacks has continued to increase each year, demonstrating greater awareness of cyber threats and the need to protect against them. But countries still lag on more specific cybersecurity measures, such as cyber incident response plans and cybersecurity awareness programs.

DATA HIGHLIGHTS

- Since 2016, when the Cybersecurity indicator was first introduced in the Index, 43% of the 47 countries with nuclear materials and/or facilities that were in previous editions of the sabotage ranking have improved their scores in Cybersecurity.[3] In 2020, 55% of countries scored 50 or above, an increase from 34% in 2016.
- However, in 2020, only Romania and Taiwan receive a full score for Cybersecurity, and 24% of 49 countries with nuclear materials and/or facilities score a zero, meaning they require none of the basic cybersecurity measures included in the Index.
- The percentage of countries that have a basic requirement to protect against cyber attacks has substantially improved—from 57% in 2016 to 73% in 2020.
- Countries are still lacking more specific cybersecurity measures. Only 47% of countries require a response plan for a cyber incident, which is a critical preparatory step in planning for a cyber attack. Only 22% of countries require licensees or operators to have a cybersecurity awareness program for all personnel with access to digital systems, which helps to address the human factor in cybersecurity.

RECOMMENDATION

Given the rapid pace with which cyber threats evolve, countries should prioritize actions to strengthen cybersecurity at nuclear facilities to prepare for, protect against, and respond to cyber threats.

- Regulators should require facilities to protect against cyber attacks, to integrate physical protection and cybersecurity, and to protect critical digital assets, such as systems related to physical protection, control, accounting, or safety.
- Threat assessments and a country's Design Basis Threat should take into account the potential for cyber attacks at nuclear facilities, as well as combined cyber-physical attacks. Tests and assessments should be required regularly to identify weaknesses and to make continuous improvements.
- Countries should require a cybersecurity response plan to prepare for and understand how best to mitigate the

[3] This percentage is calculated using 47 countries instead of 49. Jordan and the United Arab Emirates were added to the sabotage ranking in 2020 and do not have scores for previous editions of the NTI Index.

consequences of a cyber attack. Response plans can limit the damage and reduce recovery times should a facility be successfully attacked.

- Addressing the human factor is also important for cybersecurity when insiders could unwittingly introduce or exacerbate cyber vulnerabilities. Nuclear facilities should require all personnel with access to computer systems to complete programs to strengthen their awareness of cyber threats and help mitigate insider threats.
- Given the uneven capacity to address cybersecurity globally, greater effort is needed to fill capacity gaps in cooperation with other countries. This includes steps to develop, maintain, and retain the necessary capacity. Countries should contribute financial and human resources to the IAEA to support its work developing cybersecurity resources, providing training, and conducting reviews of security arrangements.

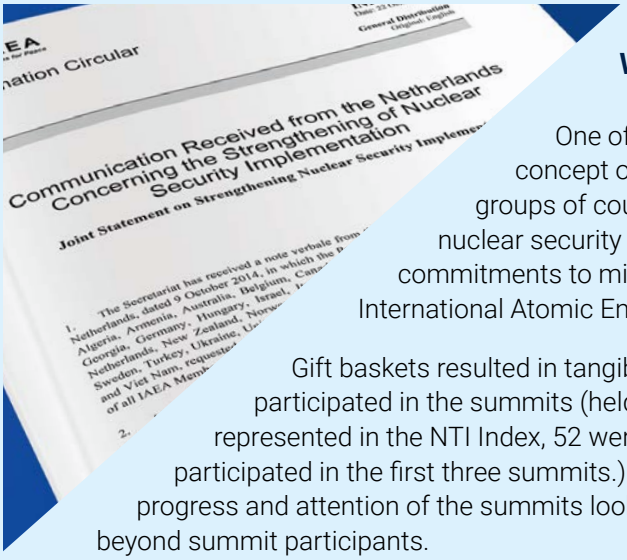
FINDING

Despite continued actions to strengthen the global nuclear security architecture, the rate of improvement has slowed and significant gaps in the architecture remain.

Because nuclear security requires global solutions, countries must participate in the network of national measures, international legal agreements, and voluntary initiatives that together form the basis of a comprehensive and effective global architecture. Because these international legal agreements are the basis for domestic legislation, regulations, and capacity, lack of participation leaves dangerous gaps.

Participation in the global architecture is largely measured in the Global Norms category of the NTI Index. This category has seen the most improvement of any category in all three rankings, but at the same time, data demonstrate that the rate of improvement has slowed. This trend is troubling, particularly when significant gaps remain:

- Until key nuclear security treaties are universal, there will be dangerous holes in global coverage of physical protection, criminalization, and the ability for countries to cooperate on prosecuting nuclear theft, smuggling, sabotage, and terrorism. NTI Index results demonstrate that international treaties are still far from universal, including the important amended CPPNM and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT). Almost all the countries that have not yet ratified these treaties are countries without nuclear materials, likely indicating that doing so is not a high priority for them.
- Voluntary commitments demonstrate a country's support for global efforts to strengthen nuclear security. Without greater participation in these efforts, initiatives and organizations such as the IAEA will be unable to fulfill their nuclear security missions, which include providing vital support and assistance to countries, coordinating international efforts, and facilitating sharing best practices through workshops and training. Whereas countries with nuclear materials generally contribute to and support international organizations and participate in voluntary initiatives, countries without materials are less engaged in those measures.
- Nuclear security information circulars (INFCIRCs) are a tool for making commitments in specific areas of nuclear security (see sidebar "What Are Nuclear Security INFCIRCs?"). Although these are relatively new instruments that originated in the Nuclear Security Summits, all IAEA member states have the opportunity to subscribe to them and demonstrate commitment to nuclear security. Participation in nuclear security INFCIRCs is currently limited.



WHAT ARE NUCLEAR SECURITY INFCIRCS?

One of the innovations of the Nuclear Security Summits was the concept of "gift baskets." These joint commitments were vehicles for groups of countries to take more ambitious steps in specific areas of nuclear security than would be possible by consensus. Examples included commitments to minimize highly enriched uranium or to implement the International Atomic Energy Agency (IAEA) nuclear security recommendations.

Gift baskets resulted in tangible progress, but their reach was limited to countries that participated in the summits (held biennially from 2010 through 2016). Of the 176 countries represented in the NTI Index, 52 were invited to participate in the summits. (Russia also participated in the first three summits.) Summit countries that were hopeful they could sustain the progress and attention of the summits looked for ways to expand participation in certain gift baskets beyond summit participants.

Conversion of Gift Baskets to INFCIRCs

The first gift basket to become available to countries outside of the summits was the 2014 Joint Statement on Strengthening Nuclear Security Implementation. The Netherlands asked the IAEA to circulate the Joint Statement to IAEA member states as an information circular (INFCIRC) in 2014. INFCIRCs are documents used for communications between the IAEA and member states. The resulting INFCIRC/869 included directions that a country wishing to subscribe could do so by informing the IAEA of its intention and by requesting that its communication be shared with all IAEA member states. Since the 2016 summit, 10 other gift baskets have been made available to all IAEA member states as INFCIRCs.[1]

As a result of making these gift baskets available beyond summit participants, five countries that did not participate in the summits have since subscribed to one or more INFCIRCs: Colombia, Ireland, Luxembourg, Qatar, and Slovenia. Although this number is lower than hoped, given that these instruments are still new, this is a good start.

INFCIRCs and the NTI Index

Because these new tools can be vehicles for countries to make commitments and to spur progress, NTI decided to give credit in the 2020 NTI Index to countries that have subscribed to INFCIRCs about nuclear security.

The NTI Index gives credit for subscribing to INFCIRC/869, through which countries commit to implement IAEA nuclear security guidance. Committing to implement IAEA nuclear security guidance helps to bring the world closer to uniform minimum standards that all countries follow, thereby raising global standards. Countries subscribing to INFCIRC/869 also commit to continuously improve nuclear security through peer review and ensure that management and personnel at nuclear facilities are demonstrably competent. Thirty-nine countries have subscribed to INFCIRC/869. China, India, Jordan, and Switzerland subscribed after it was published in 2014.

The NTI Index also gives credit to countries that subscribe to one or more of nine other nuclear security INFCIRCs. Thirty-six countries have subscribed to three or more other nuclear security INFCIRCs, nine countries have subscribed to two INFCIRCs, and five countries have subscribed to just one INFCIRC.

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[1] The full list of INFCIRCs and links to the IAEA's website can be found on the webpage of the Nuclear Security Contact Group, www.nscontactgroup.org/iaea-info-circulars.php.

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What Are Nuclear Security INFCIRCs? (continued)

The 2020 Index captured two new subscriptions to nuclear security INFCIRCs that led to score increases this year: Pakistan subscribed to INFCIRC/899 establishing principles for the Nuclear Security Contact Group, which was founded by a group of countries that participated in the summits to facilitate cooperation and sustained engagement on nuclear security after the conclusion of the summits in 2016; and Switzerland subscribed to INFCIRC/869, through which countries commit to implement IAEA nuclear security guidance.

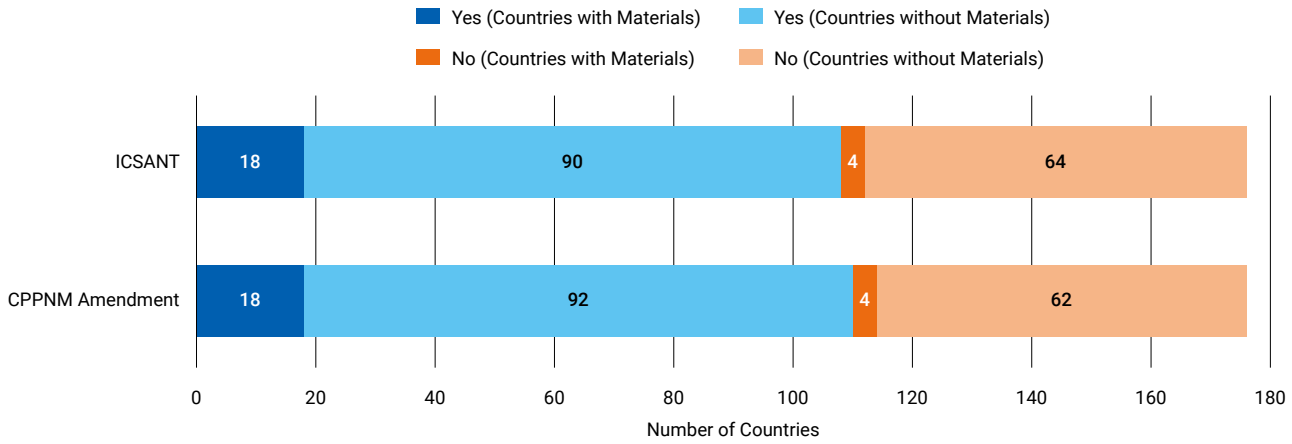
The Radioactive Source Security Assessment also identifies how many countries have subscribed to INFCIRC/910 on the security of radioactive sources. Thirty-one countries have done so, including two countries that did not participate in the summits, Luxembourg and Slovenia.

INFCIRCs are relatively new methods used for making commitments, so it is not surprising that participation is low. As they become more visible, subscriptions may increase.

DATA HIGHLIGHTS

- The rate of improvement in the Global Norms category has slowed. Of the 22 countries with weapons-usable nuclear materials, 12 countries improved in 2014, 17 improved in 2016, and 18 improved in 2018, but only 7 countries improved in 2020. Of the 154 countries without materials, 54 countries improved in 2014, 69 improved in 2016, and 77 improved in 2018, but only 32 improved in 2020.
- Large numbers of countries still have not ratified key nuclear security treaties. For example, 38% of all countries have not ratified the amended CPPNM and 18% of countries have not ratified the original CPPNM.[4] In addition, 39% of countries have not yet ratified ICSANT. (See Figure 9 for the treaty ratification status of ICSANT and the amended CPPNM.)

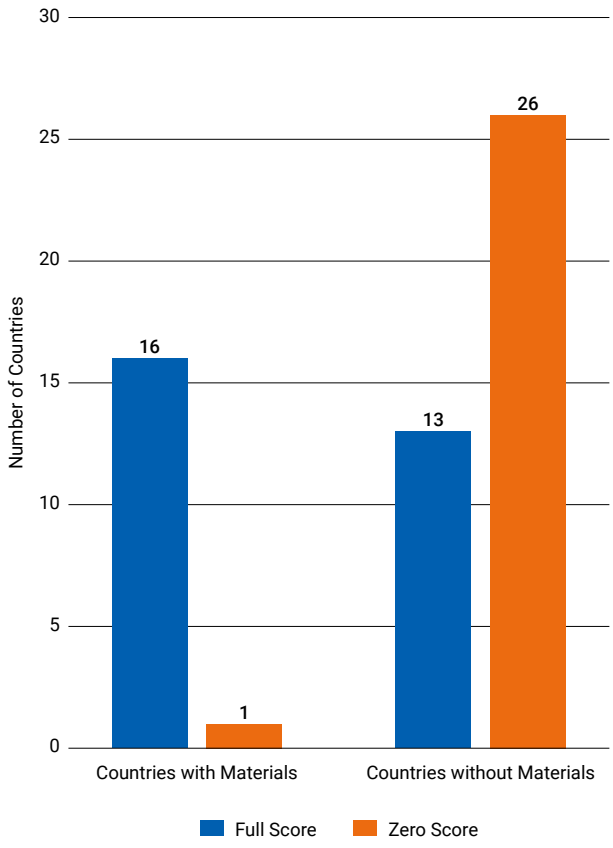
Figure 9: Status of Treaty Ratifications



[4] Four countries with materials (Belarus, Iran, North Korea, and South Africa) and two additional countries with nuclear facilities (Brazil and Egypt) have not ratified the amended CPPNM. Eritrea ratified the original and amended CPPNM after research for the NTI Index closed.

- Among countries with weapons-usable nuclear materials, 73% participate in at least six of the nine activities included in the indicator that tracks Voluntary Commitments and receive a full score. This shows a high rate of engagement with efforts to bolster the international architecture among those countries. In contrast, only 8% of countries without weapons-usable nuclear materials participate in at least six of the nine activities included in this indicator and receive a full score, showing low levels of engagement.
- Similarly, while only one country with materials—North Korea—receives a zero for Voluntary Commitments, meaning it has participated in none of the activities, 17% of countries without materials receive a score of zero. (See Figure 10 for the number of countries with a full score and a zero score for Voluntary Commitments.)
- Only 22% of all countries[5] have subscribed to INFCIRC/869, which includes commitments to implementing IAEA nuclear security guidance, continuous improvement, and demonstrable competence.
- Only 20% of all countries[6] have subscribed to three or more of the nine other nuclear security INFCIRCs included in the Index. Nine additional countries[7] have subscribed to two INFCIRCs, and five countries[8] have subscribed to just one INFCIRC.

Figure 10: Number of Countries with a Full Score and a Zero Score for Voluntary Commitments



[5] That percentage includes 73% of countries with materials and 15% of countries without materials.

[6] That percentage includes 55% of countries with materials and 16% of countries without materials.

[7] These nine countries include four countries with materials and five countries without materials.

[8] These five countries include one country with materials and four countries without materials.

RECOMMENDATION

Countries must do more to close gaps and support, contribute to, and participate in efforts to bolster the international nuclear security architecture. This will require greater political attention.

- Greater effort is needed to strengthen and sustain political attention on nuclear security and make continued progress in building an effective global nuclear security architecture.
- A coordinated effort, led by the IAEA and the United Nations and supported by member states, is needed to achieve universalization of the two foundational nuclear security legal instruments: the amended CPPNM and ICSANT. Efforts to universalize treaties should be coupled with efforts to understand barriers to ratification (such as lack of awareness or competing priorities), to address capacity needs, and to identify technical and legal assistance needed to overcome those barriers.
- Countries should implement their treaty obligations. In the context of the amended CPPNM, countries should submit information to the IAEA on their laws and regulations that implement the convention, as required by article 14.1 (see sidebar "The Amended CPPNM: A Vehicle for Renewed Focus on Nuclear Security").
- Countries, especially those without nuclear materials, must do more to contribute to, to support, and to participate in global nuclear security initiatives by becoming members of organizations such as the Global Initiative to Combat Nuclear Terrorism or the World Institute for Nuclear Security and by supporting the IAEA.
- Countries should subscribe to nuclear security INFCIRCs to demonstrate commitment to nuclear security and help raise nuclear security standards globally. Countries should subscribe to INFCIRC/869, which will help to raise the prominence of the IAEA's nuclear security guidance.

THE AMENDED CPPNM: A VEHICLE FOR RENEWED FOCUS ON NUCLEAR SECURITY

As the only legally binding treaty requiring countries to protect nuclear materials and nuclear facilities, the amended Convention on the Physical Protection of Nuclear Material (CPPNM) is the linchpin to building a strong, effective, and sustainable global nuclear security architecture.

Amended CPPNM and the Index

To measure progress toward universalization and countries' implementation of the amended CPPNM, the 2020 NTI Index includes three questions: Has the country ratified the amended CPPNM? Does it have a national authority to implement the original or the amended CPPNM? Has it translated the obligations contained in the amended CPPNM into its national regulatory framework? The results show there is still significant work needed to bolster this element of the international architecture by universalizing the amended CPPNM and fully implementing its obligations.

- Only 110 of the 176 countries included in the Index have ratified the amended CPPNM as of March 1, 2020, when research for the 2020 NTI Index closed. This means there are still major gaps in the international legal framework for nuclear security. Of the 66 countries that have not ratified the amended CPPNM, 62 do not have materials.
- Of the 110 countries, 106 have an implementation authority for the treaty.
- Of the 49 countries with nuclear materials and/or nuclear facilities, 40 have translated the amended CPPNM obligations into a national framework. Countries without materials or facilities do not receive a score for this question.

The Index also gives credit to countries that have submitted information on laws and regulations to the International Atomic Energy Agency (IAEA), as required by article 14.1 of the treaty. Of the 49 countries with nuclear materials and/or nuclear facilities, 27 have submitted information under article 14.1.[1] Although countries without materials do not receive a score for this question in the NTI Index, a review of available data from the IAEA as of June 15, 2020, shows that of 110 states parties to the amended CPPNM—with and without materials—only 47 have submitted information under article 14.1, even though doing so is a legal obligation under the treaty.[2] All states parties should take this action.

Bolstering the Treaty

The amended CPPNM-related findings and the significant decrease in overall nuclear security improvements highlighted by the 2020 NTI Index reinforce the need to revive political attention on nuclear security. The amended CPPNM review conference in 2021—and any future reviews—offers important opportunities to do so. Review conferences create checkpoints for international dialogue on nuclear security, including lessons learned, best practices, ideas for continuous improvement, and trends that affect how countries implement the treaty.

If held regularly, future review conferences for the amended CPPNM can foster accountability and sustained progress over time. As it stands now, the amendment requires only one review conference in 2021, five years after the amendment's entry into force in 2016. At the 2021 conference, countries should agree to hold regular review conferences, with each review conference setting the next date, as a way to enable a more sustainable treaty regime that can adapt as threats, technology, and best practices evolve.

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[1] Sweden submitted its laws and regulations after research for the 2020 NTI Index closed and therefore does not receive credit for doing so in this edition. It will receive credit for doing so in the next edition.

[2] Five additional countries have submitted laws and regulations under the original CPPNM.

FINDING

Countries without materials are not sufficiently engaged in efforts to bolster the global nuclear security architecture. There are also regional disparities in the strength of support for global nuclear security norms, indicating that nuclear security is not a priority in some regions.

All countries, including countries without materials, have a role in strengthening the global nuclear security architecture, but the Index data show that nuclear security may not be as high a priority for countries without materials and for countries in certain regions.

As the data for Global Norms show, countries without nuclear materials have lower rates of participation in international legal agreements, voluntary initiatives, and nuclear security INFCIRCs. There also is a disparity in rates of participation of countries without nuclear materials between different regions and members of the G-77.[9] Contributing factors include lack of resources or capacity, competing priorities, and different perspectives about nuclear security and the role of the IAEA. Some countries prioritize ensuring continued access to peaceful nuclear technology and protecting the IAEA's technical assistance resources that support peaceful use; other countries prioritize preventing nuclear terrorism and want to strengthen the IAEA's role in nuclear security.

DATA HIGHLIGHTS

- Only 21% of countries without nuclear materials receive a high score for Global Norms, compared with 68% of countries with weapons-usable nuclear materials, with significant gaps in International Legal Commitments and Voluntary Commitments.
- Of the 66 countries that have not ratified the amended CPPNM, 62 are countries without materials. Of the 68 countries that have not ratified ICSANT, 64 are countries without materials.
- Only 34% of countries without materials receive a high score for Voluntary Commitments, compared with 82% of countries with materials receiving a high score. Of countries without materials, 51% receive a low score.
- Only 8% of countries without materials participate in at least six of the nine activities included in the Voluntary Commitments indicator and receive a full score, compared with 73% of countries with materials. Of countries without materials, 17% receive a score of zero, compared with only one country with weapons-usable nuclear materials.
- The median score for countries without materials for International Legal Commitments is 86. The median score fluctuates according to the UN regional grouping: the median score is 71 for the African Group; 86 for the Asia and the Pacific Group; 86 for the Latin America and Caribbean Group; 100 for the Eastern European Group; and 100 for the Western European and Others Group. The median score for the G-77 countries is 86. (See Figure 11.)
- The median score for countries without materials for Voluntary Commitments is 33, and that score also fluctuates according to the UN regional grouping: the median score for the African Group and the Latin America and Caribbean Group is 33; the median for the Asia and the Pacific Group is 50; the median for the Western European and Others Group is 67; and the median for the Eastern European Group is 83. The median score for the G-77 countries is 33. (See Figure 12.)

[9] The Group of 77 (G-77) was established in 1964 by a group of 77 countries, although it has since increased to 134 countries. See https://www.g77.org/doc/.

Figure 11: Median Score for International Legal Commitments by Region (Countries without Materials)

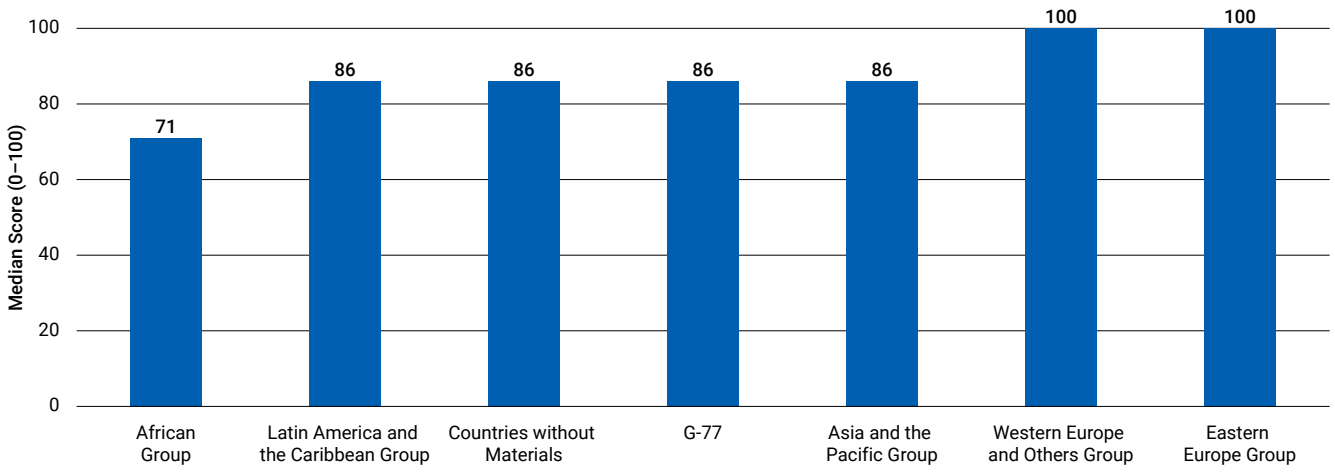
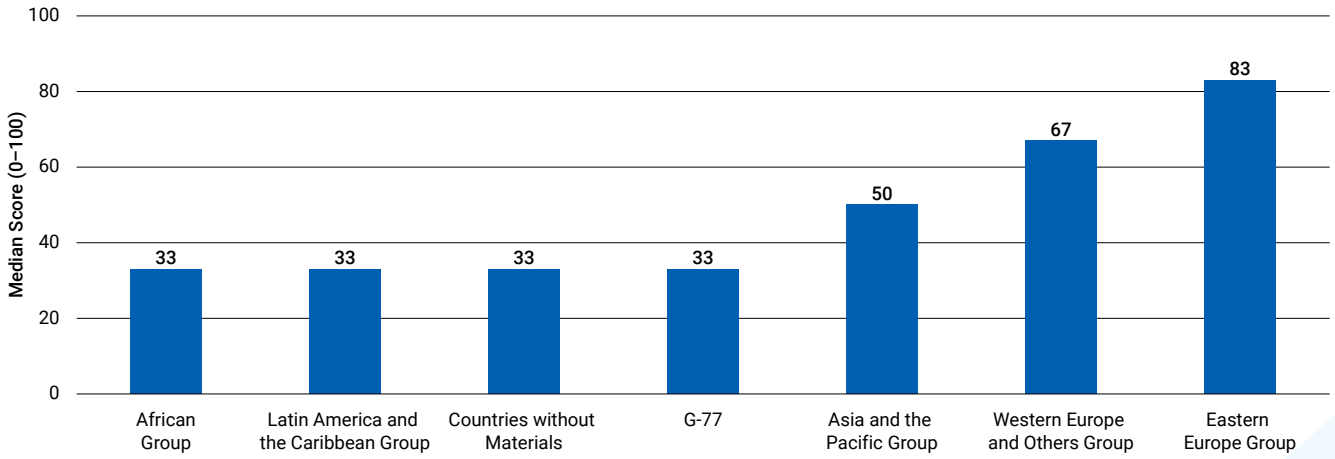


Figure 12: Median Score for Voluntary Commitments by Region (Countries without Materials)



RECOMMENDATION

Countries supportive of nuclear security should work to build a stronger, more inclusive narrative about the importance of nuclear security to achieve broader participation in global efforts to strengthen nuclear security and increased support for the IAEA's nuclear security role.

- The regional divides exposed in the NTI Index results provide further evidence that work is needed to develop a broader, more inclusive narrative for nuclear security that respects different national and regional perspectives and priorities and moves away from a zero-sum approach that pits nuclear security and peaceful use assistance against each other.
- A more compelling narrative would remind countries of the link between nuclear security and public support for peaceful use of nuclear technology. This in turn is linked to countries' ability to meet their sustainable development goals. Tying the importance of nuclear security to a more diverse set of national and regional priorities can provide a better understanding how nuclear security and access to peaceful use of nuclear technology for nuclear energy, science, and research go hand in hand.

FINDING

The IAEA still lacks the political and financial support it needs to fulfill its nuclear security mission, provide crucial nuclear security assistance to member states, and play a central coordination role for global nuclear security.

The NTI Index uses four measures to assess support for the IAEA's nuclear security mission (see sidebar "Support for the International Atomic Energy Agency"): financial or in-kind contributions to the IAEA's Nuclear Security Fund (NSF), participation at the IAEA ICONS at the ministerial level, participation in the IAEA's Incident and Trafficking Database (ITDB), and participation on the Nuclear Security Guidance Committee (NSGC), which is important in the IAEA system to update nuclear security recommendations.

Very few countries provide financial support to the IAEA's nuclear security mission. Because not all countries are able to make large financial contributions to the NSF, the low number is not surprising. However, financial support is not the only way countries can support the IAEA's nuclear security mission. There is strong engagement with the ITDB, including among countries without materials. Participation on the NSGC is weaker than for the ITDB, with participation stronger among countries with materials than countries without. Ministerial-level representation at ICONS is low, but the 2020 ICONS was only the third conference of its kind. Overall, the mixed levels of engagement in these activities and low level of financial support for the IAEA show the agency still lacks the support to successfully fulfill its nuclear security mission.

DATA HIGHLIGHTS

- Only 13% of countries have made financial or in-kind contributions to the NSF in the past two years. Of the 22 countries that have done so, 13 are countries with nuclear materials and 9 are countries without nuclear materials.[10]
- A total of 76% of countries participate in the ITDB. Participation is strong among both countries with materials and countries without materials. Of 134 participating countries, 21 have materials (95% of countries with materials) and 113 do not (73% of countries without materials).
- A total of 43% of countries participate in the NSCG. Participation is stronger among countries with materials than countries without materials. Of 76 participating countries, 19 are countries with materials (86% of countries with materials) and 57 are countries without materials (37% of countries without materials). One country with materials and six countries without materials joined the NSGC for the first time since release of the 2018 Index.[11]
- Only 30% of countries sent a minister to ICONS. Of the 53 countries that did so, 14 have nuclear materials (64% of countries with materials) and

[10] Seven countries' scores decreased for this subindicator because their NSF contributions were made before the two-year window and were not renewed: Albania, Hungary, India, Kazakhstan, Romania, Russia, and the United Arab Emirates. Five countries made new contributions in the past two years: Australia, Denmark, Indonesia, Sudan, and Sweden.

[11] Benin, Bolivia, Cambodia, Georgia, Nepal, South Africa, and Zambia. South Africa has weapons-usable nuclear materials.

39 do not (25% of countries without materials). Two countries with materials[12] and 19 countries without materials participated in ICONS at the ministerial level for the first time in 2020.[13] These numbers show that participating at ICONS at a high level is an action that all countries can take to demonstrate their commitment to the IAEA and this unique forum for nuclear security.

RECOMMENDATION

Countries should increase their financial and political support for the IAEA by contributing to the NSF or supporting and participating in IAEA activities. The IAEA should do more to build awareness of its nuclear security activities and how they have helped countries to benefit from peaceful nuclear applications.

- More countries should contribute to the IAEA's NSF, whether through financial or in-kind contributions. Countries should also reduce the number of conditions placed on those funds to provide more flexibility to the IAEA as it prioritizes its resources and engages in long-term planning.
- All countries, including countries without materials, should strive to be represented by ministers or their equivalent at the next ICONS in 2024. Doing so demonstrates support for the IAEA, as well as support for a strong ICONS that can serve as a platform for progress and commitments.
- All countries should participate in and actively report incidents to the ITDB to close the coverage gap in the IAEA's ability to track incidents of illicit tracking of nuclear and radiological materials around the world. The ITDB is vital for the IAEA to track those incidents, and the more countries that participate, the more effective and comprehensive this tracking system will be.
- At a minimum, all countries with nuclear materials and facilities should become members of the NSGC. More support and participation in the NSGC will boost the status of the IAEA's nuclear security guidance, potentially leading to broader adoption and implementation of the guidance and strengthening nuclear security implementation around the world. Countries without nuclear materials should also participate. Countries without nuclear materials have a stake in strong, effective nuclear security guidelines that all states follow, given that weaknesses in nuclear security in one country can affect others.
- To address perceptions that the IAEA's nuclear security activities pull resources away from technical cooperation, the IAEA should build greater awareness of how its nuclear security activities support countries' peaceful use of nuclear technology. This effort can include greater transparency by the IAEA on how countries support and participate in activities such as the ITDB, the NSGC, and the IAEA International Physical Protection Advisory Service (IPPAS) missions. One way to build awareness is to highlight how individuals around the world benefit from nuclear security and from the IAEA's assistance daily.

[12] China and Kazakhstan. Italy's score also improved in 2020, but it had previously received credit for ministerial attendance in 2016. Its score dropped to 0 in 2018 owing to its lack of representation at the ministerial level at the 2016 ICONS.

[13] Brazil, Lithuania, and Romania received credit in the 2016 NTI Index for previous ICONS attendance at the ministerial level, but their scores dropped to 0 in 2018 owing to their lack of representation at the ministerial level at the 2016 ICONS. Their scores improved in 2020 when they were once again represented at the 2020 ICONS at the ministerial level. Two countries with materials (Belarus and Pakistan) and 18 countries without materials that previously participated at the ministerial level did not do so in 2020.

SUPPORT FOR THE INTERNATIONAL ATOMIC ENERGY AGENCY

The International Atomic Energy Agency (IAEA) plays an important role in strengthening global nuclear and radiological security. It provides crucial nuclear security assistance to member states and helps coordinate international efforts. Support for the IAEA's role in nuclear security has grown in recent years but is still not as robust as for its role in nuclear safeguards, nuclear safety, or development assistance.

Misplaced Competition for Resources

The IAEA's assessed budget for nuclear security has increased slightly in recent years, but it still relies on unpredictable voluntary contributions to its Nuclear Security Fund from member states concerned about nuclear terrorism and wanting to support the IAEA's nuclear security activities. Financial contributions to the Nuclear Security Fund enable the IAEA to provide assistance, host workshops and training, and conduct peer reviews. Financial contributions often are earmarked for particular projects, which hinders the IAEA's ability to prioritize resources and plan for the long term. In addition, some states worry that increasing the IAEA's assessed budget for nuclear security will decrease the resources available for development assistance, which is funded by the IAEA's Technical Cooperation budget. Countries focused on gaining the benefits of peaceful nuclear technology, whether to provide reliable energy, life-extending medical treatment, or opportunities for scientists, want the IAEA to prioritize technical cooperation and assistance.

A zero-sum approach to the IAEA's activities limits its ability to fulfill its nuclear security mission. These interests do not have to conflict and should instead be mutually reinforcing. An act of nuclear terrorism anywhere will have global consequences and could have a negative effect on the public's perception—and acceptance—of peaceful use of nuclear material and technology. The IAEA and member states supportive of its nuclear security mission should reinforce the positive link between nuclear security and countries' continued ability to benefit from peaceful use, and the IAEA's important role in both technical cooperation and nuclear security.

The IAEA and the NTI Index

To reflect the important role the IAEA plays in nuclear security, this year's NTI Index includes new questions about countries' support for the IAEA's nuclear security activities. In addition to existing questions asking whether a country has made a financial or in-kind contribution to the IAEA's Nuclear Security Fund in the past

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Support for the International Atomic Energy Agency (continued)

two years and whether a country has hosted an International Physical Protection Advisory Service (IPPAS) mission, the Index also now measures whether countries participate in the following:

- The IAEA's Incident and Trafficking Database (ITDB). Participation in the ITDB demonstrates political support for the IAEA's efforts to track incidents of theft, loss, and misuse of nuclear and radiological materials.
- The IAEA's Nuclear Security Guidance Committee. Participation in this committee demonstrates support for the IAEA's role in developing guidance for countries to update their nuclear security laws and regulations.
- The IAEA's International Conference on Nuclear Security (ICONS) at the ministerial level. Participation in ICONS at the ministerial level demonstrates support for ICONS as a forum to increase political attention on nuclear security. If more countries send high-level representatives, ICONS is more likely to become a forum for making political commitments and reporting on progress.

The Radioactive Source Security Assessment also includes questions assessing countries' engagement with the IAEA's Code of Conduct for the Safety and Security of Radioactive Sources and related Supplemental Guidance.

Data Constraints

NTI and the EIU identified other factors that could show support for the IAEA. These include whether a country sends experts to train to join IPPAS mission teams and whether a country has reported incidents to the ITDB. Information barriers at the IAEA and a lack of transparency on the part of some governments limit the availability of reliable data.

FINDING

With the exception of publishing regulations, country actions to build confidence in nuclear security remain limited. Information sharing and accountability around stocks of materials are particularly weak, and peer review, critical to strengthen nuclear security and to build confidence, is still underused.

Because the consequences of an act of nuclear terrorism would be global, all countries have an interest in knowing that neighboring countries or countries in their region are taking their security responsibilities and commitments seriously by securing their nuclear materials and facilities to the highest standards. Sharing information or taking part in activities such as peer review can increase confidence around nuclear materials and can enhance public acceptance of peaceful nuclear activities.

- Almost all countries publish their nuclear security regulations, and more than half publish other information about their nuclear security. Most countries also have issued public declarations describing their progress on nuclear security at major public forums such as ICONS. Such actions are a positive sign that countries are interested in sharing their successes and in demonstrating they are being responsible stewards of nuclear materials and technology. These steps build confidence that a country has an effective regulatory framework in place.
- Transparency around stocks of weapons-usable nuclear materials is extremely weak, even for civilian materials. This lack of transparency occurs despite the availability of two formal reporting mechanisms for civilian materials. INFCIRC/549 on plutonium management guidelines includes a reporting template for plutonium stocks, although some countries also use it to report on civilian HEU stocks. INFCIRC/912—derived from the Norway-sponsored "gift basket" on HEU minimization at the 2016 Nuclear Security Summit—includes a reporting mechanism for civilian HEU. Transparency around military stocks is even more limited than for civilian materials.
- Not enough countries are taking advantage of peer reviews, such as those offered by the IAEA, even though they are critical tools to strengthen nuclear security, share best practices, demonstrate commitment to continuous improvement, and build confidence in a country's nuclear security.

DATA HIGHLIGHTS

- Almost all of the 49 countries with weapons-usable nuclear materials and/or nuclear facilities—a total of 45 countries—publish their nuclear security regulations. In addition, of countries with weapons-usable nuclear materials and/or nuclear facilities, 57% publish an annual nuclear security report.
- Of countries with nuclear materials and/or facilities, 67% have made a public declaration about their nuclear security progress in the past two years, in conjunction with international, multilateral, or regional nuclear security conferences. Another 18% of countries made declarations previously but have not done so in the past two years.
- Ten countries with nuclear materials—fewer than half—have made public declarations or reports about civilian nuclear materials since January 1, 2019. China has made declarations before that date. Eleven countries have never made declarations about their civilian materials. Norway and Australia are the only two countries that have made a declaration of civilian HEU stocks using INFCIRC/912.
- Only two of nine countries with nuclear weapons (the United Kingdom and the United States) have made declarations about their military stocks.

- Of countries with nuclear materials and/or nuclear facilities, 65% have hosted an IAEA IPPAS mission, but only 33% have done so in the past five years. While 35% have never hosted an IPPAS mission or follow-up mission, ten countries have never had a nuclear security peer review of any type, from the IAEA or otherwise.[14]
- Five countries—Australia, Canada, Japan, Norway, and Sweden—have taken the extra confidence-building step of publishing the results of an IPPAS mission in the past five years.

RECOMMENDATION

Countries with nuclear materials and nuclear facilities should take more steps to build confidence in their nuclear security, including improving transparency around stocks of nuclear materials and increasing participation in peer reviews.

- Countries should publish annual reports about nuclear security. This information provides useful information about how a country is implementing nuclear security, thereby building confidence in that country's security practices.
- Countries should regularly make public declarations about nuclear security progress at international, multilateral, or regional conferences on nuclear security (such as ICONS). Doing so demonstrates commitment to nuclear security progress and underscores the need for continuous improvement.
- Transparency around material stocks, both civilian and military, increases confidence that materials are properly accounted for and enables governments and non-governmental organizations to track global inventories. Countries with weapons-usable nuclear materials should be transparent about their civilian stocks of nuclear materials. It is possible to share information about material stocks while also protecting sensitive information. Countries that have subscribed to INFCIRC/912 on HEU minimization should fulfill their commitment to report on HEU stocks. Countries should use both INFCIRC/912 and INFCIRC/549 to report on their civilian HEU and separated plutonium stocks, and they should do so regularly.
- Countries with military stocks should build confidence by providing aggregate data about those stocks without compromising sensitive national security information.
- All countries with nuclear materials and/or facilities should host IPPAS missions every five years to build confidence and demonstrate a commitment to nuclear security and continuous improvement. In addition to IPPAS missions, countries should participate in bilateral or multilateral peer reviews as another means of continuously improving nuclear security and sharing best practices. Peer reviews are most useful when conducted regularly to follow up on the implementation of recommendations from previous peer reviews. All countries that have had peer reviews should host regular follow-up missions.
- Countries should publish summaries of the results of peer reviews to further build confidence that they are taking remedial actions to strengthen their security.
- The ability of the IAEA to conduct more IPPAS missions is hampered by a lack of experts to participate. Experts on IPPAS missions come from member states (there are no IAEA reviewers). To support increased demand, countries should send their experts to receive IAEA training to serve on IPPAS mission teams and then encourage them to participate in those missions.

[14] Algeria, India, Israel, Italy, Morocco, North Korea, Pakistan, Russia, Slovakia, and Spain.

FINDING

More countries are interested in acquiring nuclear technology for research or energy, but the nine countries planning new nuclear power programs have varying levels of preparedness to take on nuclear security responsibilities.

Unlike the number of countries with materials that has declined over the past decade, the number of countries with nuclear facilities included in the sabotage ranking has increased from 45 to 47 since the ranking was introduced in 2016, and the number of countries bringing research or power reactors online is projected to grow. Countries that build new nuclear reactors without putting in place the regulatory structures necessary for security can create new vulnerabilities and opportunities for nuclear terrorism—and negatively affect public support for peaceful use of technology.

Nine countries with nuclear materials or nuclear facilities or both are planning new nuclear power programs, and their levels of preparedness for nuclear security are of particular interest. The countries are Bangladesh, Belarus, Egypt, Indonesia, Jordan, Kazakhstan, Poland, the United Arab Emirates, and Uzbekistan.[15] The NTI Index results show that these countries are not adequately prepared for the full spectrum of responsibilities necessary to provide appropriate security to nuclear facilities. Also, many of these countries are ill-equipped to address insider threats and cyber threats.

DATA HIGHLIGHTS

- Of the nine countries planning new nuclear power programs, four receive a high score in the Index[16] and five receive a medium score.[17]
- Only Belarus receives a high score for the important Security and Control Measures category, which assesses the comprehensiveness of a country's regulatory structure. Six countries receive a medium score,[18] and two countries receive a low score for this category.[19]
- Performance among the nine countries is particularly weak for Insider Threat Prevention. Only Belarus receives a high score for this indicator. Three countries receive a medium score,[20] and five countries receive a low score,[21] including three that receive a score of zero.[22]
- Similarly, performance is weak for Cybersecurity. Only Jordan receives a high score for this indicator. Three countries receive a medium score,[23] and five countries

[15] These countries are included in the theft ranking for countries with weapons-usable nuclear materials or the sabotage ranking because they have nuclear materials or nuclear research reactors. They do not have nuclear power reactors. For more about the status of Belarus's nuclear power program, see footnote 2. In addition to these nine countries, five other countries without weapons-usable nuclear materials or nuclear facilities are planning new nuclear power programs: Lithuania, Saudi Arabia, Thailand, Turkey, and Vietnam. They are not currently assessed in the Security and Control Measures category, and the status of their regulatory preparedness for nuclear security cannot be determined by the NTI Index.

[16] Indonesia, Kazakhstan, Poland, and the United Arab Emirates.

[17] Bangladesh, Belarus, Egypt, Jordan, and Uzbekistan.

[18] Indonesia, Jordan, Kazakhstan, Poland, the United Arab Emirates, and Uzbekistan.

[19] Bangladesh and Egypt.

[20] Kazakhstan, Poland, and the United Arab Emirates.

[21] Bangladesh, Egypt, Jordan, Indonesia, and Uzbekistan.

[22] Bangladesh, Egypt, and Jordan.

[23] Belarus, Poland, and the United Arab Emirates.

receive a low score,[24] including three that score a zero.[25] Only five countries require protection against cyber attacks,[26] while the other four countries do not.[27]

RECOMMENDATION

Interest in peaceful nuclear use should be met with efforts to prepare those countries to assume nuclear security responsibilities. Countries considering new nuclear energy capabilities should establish the legal and regulatory frameworks and develop the capacity necessary to be responsible stewards of their nuclear power programs.

- As more countries take advantage of peaceful nuclear technology for research or energy purposes, it is important to ensure that they have the national nuclear security regulatory regimes and human capacity to maintain strong and effective nuclear security. Countries building new nuclear power plants, for example, should prioritize being responsible stewards of nuclear materials and technology to prevent acts of nuclear terrorism.
- Countries seeking to develop nuclear energy capabilities should put in place the regulatory structures required to implement nuclear security, such as an independent regulatory body and a comprehensive set of regulations. Regulations should address the vital areas of insider threat prevention, cybersecurity, and security culture, as well as traditional areas such as physical protection, control and accounting, and response capabilities.
- Countries seeking nuclear energy have a stake in a strong global nuclear security architecture and should increase their participation in strengthening global nuclear security by ratifying relevant international treaties, engaging in voluntary nuclear security initiatives, and supporting the IAEA.
- Countries seeking nuclear energy also should build confidence in their nuclear security and their commitment to putting in place appropriate regulatory mechanisms by sharing information about their nuclear security, hosting peer reviews, and signing nuclear security INFCIRCs. Doing so will also help to gain public support for new nuclear energy programs.
- Countries and businesses offering to sell nuclear facilities and services should include in their proposals support for developing adequate regulatory and human resources to effectively manage client countries' nuclear security responsibilities.

[24] Bangladesh, Egypt, Indonesia, Kazakhstan, and Uzbekistan.

[25] Bangladesh, Egypt, and Uzbekistan.

[26] Belarus, Jordan, Kazakhstan, Poland, and the United Arab Emirates.

[27] Bangladesh, Egypt, Indonesia, and Uzbekistan.

Radioactive Source Security Assessment

Thousands of radioactive sources used in countries around the world for medical, industrial, agricultural, research, or other purposes could be stolen and used in a dirty bomb.

There is no existing global assessment of the security around radioactive sources. To fill this gap, this report includes a separate, first-of-its-kind Radioactive Source Security Assessment of national policies, commitments, and actions to secure radioactive sources and prevent a dirty bomb in 176 countries. This new assessment also uses publicly available information, but it does not score or rank countries.

THE RISK OF A DIRTY BOMB

Thousands of radioactive sources used in countries around the world for medical, industrial, agricultural, research, or other purposes could be stolen and used in a dirty bomb. Not only are these sources widely used, but they are housed in locations that lack high levels of security, such as hospitals and universities and other industrial settings. Because a dirty bomb is relatively easy to construct, its use is more likely than a nuclear weapon. It would not result in large numbers of deaths or injuries, but the consequences would still be serious: large-scale economic costs stemming from cleanup and inability to use the affected area for years, environmental damage, and significant psychological consequences.

ABOUT THE RADIOACTIVE SOURCE SECURITY ASSESSMENT

The Radioactive Source Security Assessment aims to do the following:

- Build greater awareness of the importance of securing radioactive sources.
- Catalyze a dialogue about priorities for strengthening radioactive source security.
- Promote progress in securing radioactive sources and in reducing the quantities of the most dangerous radioactive sources and applications, including through the use of alternative technologies.
- Highlight leading practices in radiological security, including supporting global norms.
- Provide a unique resource that sets a baseline understanding of the status of global radiological security.
- Promote reporting, information sharing, and benchmarking of national and international commitments and actions on radiological security.

Unlike the Nuclear Security Index, the new Radioactive Source Security Assessment does not score or rank countries. The methodology also does not involve in-depth country research. Instead, the assessment relies on existing databases and other sources of consolidated information. In future years, NTI may expand the assessment to include scores, ranks, and more in-depth research.

A separate panel of international radiological security experts advised the development of the Radioactive Source Security Assessment (see p. 76).

THE FRAMEWORK

The Radioactive Source Security Assessment includes four categories:

- **National Measures:** This category assesses a country's domestic policies, commitments, and actions for managing and securing radioactive sources. It asks (a) whether countries have an independent regulatory body to provide oversight over radioactive sources; (b) whether a country's domestic laws and regulations explicitly require security (not just safety) measures to be in place to protect radioactive sources; (c) whether the country maintains a national registry of radioactive sources, a key step in tracking and accounting for sources at the national level; (d) whether the country has authority to inspect facilities with radioactive sources; and (e) whether there are licensing requirements for the export of International Atomic Energy Agency (IAEA) Category 1 radioactive sources.[28]
- **Global Norms:** This category assesses a country's international commitments and support for global norms around radioactive sources. It examines each country's commitments in the context of the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, including the Supplemental Guidance on the Import and Export of Radioactive Sources and Supplemental Guidance on the Management of Disused Radioactive Sources. It also asks whether a country participates in international organizations or conferences and is a party to key international legal agreements related to radiological security.
- **Alternative Technologies:** This category assesses a country's commitment to supporting the development and implementation of alternative technology to high-activity radioactive sources, as well as each country's capacity to sustainably implement alternative technologies to high-activity radioactive sources.
- **Risk Environment:** Similar to the NTI Index, the Radioactive Source Security Assessment includes indicators of a country's risk environment.

[28] Category 1 sources are radioactive materials that, according to the IAEA, "would be likely to cause permanent injury to a person who handled it, or were otherwise in contact with it, for more than a few minutes." IAEA Category 1 sources are as follows: radioisotope thermoelectric generators (RTGs); irradiators; teletherapy sources; and fixed, multibeam teletherapy (gamma knife) sources. See www-pub.iaea.org/MTCD/publications/PDF/Pub1227_web.pdf.

Framework for the Radioactive Source Security Assessment

See the Methodology FAQ on p. 78 and the full EIU methodology at www.ntiindex.org for more information on the methodology for the Radioactive Source Security Assessment.

Radioactive Source Security Assessment: Findings and Recommendations

FINDING

The international architecture for radiological security is extremely weak, and the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, which is the foundation of that architecture but is voluntary and non-binding, is not universal.

The international architecture for radiological security is extremely weak. The International Atomic Energy Agency (IAEA) Code of Conduct on the Safety and Security of Radioactive Sources (Code of Conduct) and related Supplemental Guidance, which provides the foundation of the global radiological security architecture, is non-binding and is not universal (see sidebar "The IAEA Code of Conduct"). It does not provide a harmonized set of standards or rules with which countries, even those having expressed political commitment, are legally obligated to comply. Given the lack of standards or rules, national approaches to radiological security vary and countries are left to make their own interpretations of the provisions of this voluntary framework or to selectively apply the Code of Conduct and Supplemental Guidance.

Participation in other parts of the radiological security architecture beyond the Code of Conduct is also weak. Gaps in membership in international initiatives and inconsistent implementation of multilateral treaties and voluntary instruments contribute to variations in national approaches to radiological security that can be exploited by bad actors.

Given the lack of standards or rules, national approaches to radiological security vary and countries are left to make their own interpretations.

DATA HIGHLIGHTS

- 78% of countries have made a political commitment to the IAEA Code of Conduct, which is the cornerstone of the global radiological security architecture.
- 61% of countries have ratified the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), which requires states parties to criminalize certain activities and cooperate with one another to prosecute those who commit those crimes.
- 60% of countries have ratified the Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency.

THE IAEA CODE OF CONDUCT

The IAEA Code of Conduct on the Safety and Security of Radioactive Sources (Code of Conduct)—along with the Supplemental Guidance on the Import and Export of Radioactive Sources and Supplemental Guidance on the Management of Disused Radioactive Sources—is a non-binding instrument that contains voluntary provisions to be implemented by subscribing states.

The Code of Conduct contains basic principles suggesting that states "take appropriate measures to ensure that the radioactive sources within their territory are safely managed and securely protected during their lifetime."[1] It also calls for effective national legislation and regulatory controls over radioactive sources. The objectives of the Code of Conduct are as follows:

- Help states to reach and maintain a high level of safety and security of radioactive sources, including at the end of their useful lives.
- Support states in establishing national legislative and regulatory systems of control by providing a basic governance framework for radioactive sources made up of key safety and security requirements that states should address in their laws and regulations as well as by their administrative bodies.
- Prevent unauthorized access, damage, theft, or unauthorized transfer of radioactive sources.
- Prevent malicious use of radioactive sources and mitigate and minimize the consequences of any accident or malevolent act involving radioactive sources.

The Code of Conduct does not provide a detailed or exhaustive list of measures, and it is not legally binding. Instead, the Code of Conduct proposes elements for a legislative framework for the safety and security of radioactive sources and elements for a regulatory body, including its powers and responsibilities.

The Supplemental Guidance on the Import and Export of Radioactive Sources provides guidance that is not legally binding for countries on how to regulate imports and exports of certain radioactive sources. It is intended to establish a common framework that states may apply to Category 1 and 2 radioactive sources, as well as to other types. According to this guidance, countries are requested to appoint a point of contact to facilitate import and export of radioactive sources. In addition, a country can provide the IAEA with its responses to the Importing and Exporting States Questionnaire to help facilitate the timely review of export requests and to further harmonize the application of the guidance.

The Supplemental Guidance on the Management of Disused Radioactive Sources provides further direction for establishing a national policy and strategy for the management of disused sources and for implementing management options such as recycling and reuse, long-term storage pending disposal, and return to a supplier.

[1] See paragraph 17 of the Code of Conduct, at www-pub.iaea.org/MTCD/publications/PDF/Code-2004_web.pdf.

- 46% of countries have ratified the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.
- 49% of countries are members of the Global Initiative to Combat Nuclear Terrorism (GICNT).
- 41% of countries sent an official delegation to the 2018 IAEA International Conference on the Security of Radioactive Sources.

RECOMMENDATION

Countries should bolster the global radiological security architecture by ratifying key international agreements, by making political commitments to the IAEA Code of Conduct and related Supplemental Guidance, and by participating in voluntary initiatives.

- Countries should work with the IAEA to universalize and strengthen implementation of the Code of Conduct and related Supplemental Guidance, including through sharing of best practices and assistance to countries, with the goal that all countries adhere to minimum standards.
- Countries should (a) ratify and fully implement ICSANT, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, and the Convention on Spent Fuel Management; (b) join the GICNT; and (c) send delegations to key international conferences on radiological security, such as those hosted by the IAEA. Participation in key radiological security initiatives and conferences provides opportunities for countries to build awareness of radiological risks, share best practices and lessons learned, and strengthen professional networks.
- Countries should contribute to the IAEA's radiological security work through political, technical, and financial support to assist countries in their implementation of the Code of Conduct and Supplemental Guidance, as well as other IAEA guidance on radiological security.

FINDING

Most countries do not have adequate national regulatory frameworks for regulating and providing oversight of radioactive sources, including security requirements.

The foundation of a country's ability to secure and control radioactive sources is a robust regulatory framework. A legislative and regulatory framework forms the basis for effective control of radioactive sources. Regulatory oversight by competent authorities, security requirements, a state registry, inspection authority, and export licensing requirements provide for enforcement of security and control of radioactive sources at every stage of their life cycle. Inadequate national legislation and regulatory oversight creates dangerous gaps in the global radiological security regime.

The Radioactive Source Security Assessment finds that most countries do not have the national regulatory regimes in place to secure and control radioactive sources and protect them from theft and unauthorized use. In fact, only one-quarter of countries assessed have all the regulatory requirements included in the assessment, and just under one-fifth of countries have none. Only about half of countries have specific requirements to secure radioactive sources. These statistics uncovered by the new assessment are worrying given that radioactive sources are located in open environments across numerous facilities around the world, such as hospitals and research centers, and are vulnerable to theft and could be used to make a dirty bomb.

DATA HIGHLIGHTS

- Only 23% of countries have in place all five regulatory elements included within the National Measures category: a regulatory oversight body, required security measures, a state registry, inspection authority, and export licensing requirements. In 17% of countries, none of these measures are required.
- Though 81% of countries have established a regulatory oversight body for radioactive sources, only 56% of countries have a regulatory requirement to secure radioactive sources, and only 51% of countries have authority to inspect facilities with radioactive sources. These numbers indicate that many countries' oversight bodies deal only with safety, not security, of radioactive sources.
- Only 45% of countries have licensing requirements for exporting IAEA Category 1 sources,[29] the most dangerous kinds of sources.
- Only 36% of countries maintain an active national registry of radioactive sources.

RECOMMENDATION

Countries should establish the national legal framework necessary to effectively regulate and control radioactive sources, including an oversight body and requirements to secure radioactive sources.

- Countries should establish a national regulatory body to oversee security of radioactive sources through regulations, inspections, enforcement, and building human capacity.
- Countries should bridge regulatory gaps to address the security of radioactive sources and, if needed, integrate safety and security measures in their national framework.
- Countries should establish a minimum level of security to protect radioactive sources from theft, using a graded approach to securing different categories of sources.
- The regulatory body should have authority to inspect facilities with radioactive sources. Inspectors should be well trained and inspect against common standards, inspections should result in a set of recommended corrective actions, and processes should be in place to follow up on inspections to confirm that recommendations are met.
- The regulatory body should maintain a national registry of radioactive sources so it can effectively provide oversight of those sources and track them through their life cycle.

[29] See footnote 28.

FINDING

There are significant gaps in the ability of countries to track and regulate the movement of radioactive sources, both nationally and transnationally, so that only authorized recipients receive and possess radioactive sources.

Most countries do not have adequate regulatory requirements for tracking and controlling the movement of radioactive sources. The ability to track and control the location and movement of radioactive sources is the first line of defense in preventing unauthorized recipients from receiving and possessing these sources. Countries do not have the domestic regulatory tools necessary to be able to track sources through national registries or licensing requirements, and there are low rates of participation in voluntary actions under the IAEA's Supplemental Guidance on Import and Export of Radioactive Sources. This low rate of participation suggests that national regulatory environments lag behind the Import and Export Guidance, and countries are not yet equipped to engage in a standardized approach to imports and exports.

DATA HIGHLIGHTS

- Only 36% of countries maintain an active registry of radioactive sources that would enable a regulatory body to track those sources throughout their life cycle.
- Only 45% of countries have licensing requirements for the export of IAEA Category 1 sources, which are the most dangerous type of sources.
- Among the countries assessed, 68% have made a political commitment to the Supplemental Guidance on the Import and Export of Radioactive Sources, which is the component of the international radiological security regime under the IAEA Code of Conduct that attempts to harmonize export controls around the world.
- Though 81% of countries have nominated a point of contact to facilitate import and export of radioactive sources, a relatively easy action to take, only 60% of countries have made available to the IAEA their responses to the IAEA Importing and Exporting States Questionnaire.

RECOMMENDATION

Countries should put in place national measures to track and control the movement of radioactive sources domestically and internationally, to prevent them from falling into the wrong hands.

- Domestically, a national registry of radioactive sources allows regulators to follow transactions from origin, through transfer to another licensee or export, to final disposition. Countries should establish a national source tracking system that includes IAEA Category 1 and 2 sources at a minimum. Countries should update and verify the registry so that radioactive sources can be tracked from the time they are manufactured or imported through the time of their disposal or export.
- Countries should impose licensing requirements for the export of IAEA Category 1 sources. Stringent import and export controls are necessary to track the movement of radioactive sources around the world.
- Countries should make a political commitment to support the IAEA Supplemental Guidance on Import and Export of Radioactive Sources to enable global tracking and control of the movement of radioactive sources. Countries should implement those commitments and seek assistance from the IAEA where necessary.
- To facilitate the timely review of export authorizations and further harmonize the application of the Import and Export Guidance, countries should nominate a point of contact and make available their responses to the IAEA Importing and Exporting States Questionnaire.

FINDING

Cradle-to-grave controls on radioactive sources remain insufficient.

Countries are ill-equipped to regulate and control radioactive sources in their country at all stages of their life cycles, from production, manufacture, use, and transport to disposition. Strengthening chain-of-custody procedures and regulatory controls can prevent the loss of control of radioactive sources and avoid end users abandoning sources, owing to high disposal costs and lack of commercial disposition pathways or national repositories. The vast majority of countries do not have an active registry of radioactive sources, which means regulators cannot plan for end-of-life management strategies that would lead to safe and secure disposition pathways. Lack of preparedness to deal with end-of-life management is also evidenced by the extremely low number of countries that have made a political commitment to the IAEA Supplemental Guidance on Management of Disused Radioactive Sources.

DATA HIGHLIGHTS

- Only 36% of countries maintain an active registry of radioactive sources that would allow a regulatory body to track the sources and to identify appropriate disposition pathways.
- Only 21% of countries have made a political commitment to the IAEA Supplemental Guidance on Management of Disused Radioactive Sources. The significantly low rate of participation in this Supplemental Guidance, although a new instrument as of 2017, suggests that countries are not ready to implement the end-of-life management commitments it contains.

RECOMMENDATION

Countries should establish regulatory measures and practices to track materials throughout their life cycles and follow relevant IAEA guidance on end-of-life management.

- Countries should establish a robust and holistic regulatory framework for the security and control of radioactive sources throughout their life cycles, including transportation, possession, and disposition. The regulatory framework should be supported by a national registry of radioactive sources that can track sources through all stages of the life cycle. This tracking is necessary to support life-cycle management plans and to identify appropriate disposition pathways.
- Countries should develop national end-of-life policies and strategies, supported by the recent IAEA Supplemental Guidance, which include roles of suppliers, manufacturers, and governments.
- Countries should make a political commitment to the Supplemental Guidance on Management of Disused Radioactive Sources and take appropriate steps to implement those commitments, seeking assistance from the IAEA where necessary.

FINDING

Very few countries have made public commitments to replace high-activity radioactive sources with alternative technology, and there is varying capacity around the world to implement and sustain the technology's use.

Security of radioactive sources and their supply chains can and should be tightened, but the only way to eliminate the risk posed by these sources is to replace them with safe, effective alternative technologies that have equivalent, and in some applications better, outcomes. There are significant challenges to adopting alternative technology around the world. Critical obstacles in the developing world include a lack of skilled and trained people to operate and maintain new technologies, and challenges to national infrastructure, such as an unreliable electrical grid. As an example, replacing cobalt-60 teletherapy devices with linear accelerators (LINACs) can be very costly, require highly qualified personnel for successful operation, and require a stable power and reliable cooling water supply system for the sustainable operation of this equipment.

The Radioactive Source Security Assessment shows that only a few countries have made commitments to replace high-activity radioactive sources with equally effective, but less-dangerous, alternative technologies, as evidenced by a review of national regulations, policies, and international commitments. The Radioactive Source Security Assessment also found that the capacity to adopt new technologies is uneven around the world, owing to significant infrastructure and educational barriers.

DATA HIGHLIGHTS

- Only 6% of countries have publicly declared a regulatory requirement, policy, or commitment to implementing alternative technologies to high-activity radioactive sources.
- Only 18% of countries have subscribed to IAEA Information Circular (INFCIRC) 910, the Joint Statement on Strengthening the Security of High-Activity Sealed Radioactive Sources, which includes a commitment to support the development of alternative technologies that do not rely on high-activity sources, through research and development and the introduction of regulatory incentives.
- 15% of countries have frequent power outages and are in the 80th to 99th percentile of countries with businesses experiencing power outages each month.
- 13% of countries are in the 0 to 19th percentile for population over age 25 with a tertiary degree or higher. Only 13% are in the 80th to 99th percentile.

RECOMMENDATION

Countries should commit to replacing high-activity radioactive sources with alternative technologies where possible. They should work to identify and address challenges to adopting alternative technology and to share information that can help other countries adopt these technologies, if they have the capacity to do so.

- As progress on the technical, operational, and economic feasibility of replacement technology continues, countries should move to permanent risk reduction by transitioning to alternative technologies.
- Countries should subscribe to INFCIRC/910 and support other international initiatives to develop alternative technology.
- Countries should put in place policies and time lines to phase out high-activity radioactive sources and to replace them with alternative technology.
- To address barriers that will hinder these countries' readiness to adopt alternative technologies, countries should share information to overcome these barriers, such as user awareness and preference, costs, research standards and operating protocols, and effectiveness.
- Countries should support research and development to find solutions to national infrastructure barriers, particularly in regions where capacity to support alternative technologies remains a challenge. This includes more training and education resources to develop the skilled workforce needed to safely operate LINACs and more advanced alternative technologies.

About the Expert Panels

To develop each edition of the NTI Index, the Economist Intelligence Unit (EIU) and NTI convene a panel of highly respected nuclear security experts with a broad range of expertise from countries around the world. This year, NTI and the EIU also sought advice from experts for the new Radioactive Source Security Assessment and from experts on terrorism.

The International Panel of Experts was instrumental in considering options for strengthening the 2020 NTI Index as part of an effort to raise standards and promote continuous improvement.

INTERNATIONAL PANEL OF EXPERTS

The International Panel of Experts was instrumental in considering options for strengthening the 2020 NTI Index as part of an effort to raise standards and promote continuous improvement. The panel's input also 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. 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, Senior Research Fellow, Eurasian Research Institute

Irma Arguello, CEO, Nonproliferation for Global Security Foundation

Kelsey Davenport, Director, Nonproliferation Policy, Arms Control Association

Anna Ellis, Principal Consultant, Indigon Nuclear

Hubert Foy, Director and Senior Research Scientist, African Centre for Science and International Security (AFRICSIS)

Roger Howsley, Executive Director, World Institute for Nuclear Security

Feroz Khan, Research Professor, U.S. Naval Postgraduate School

Masahiro Kikuchi, Former Executive Director of the Nuclear Material Control Center, Japan; CEO KIKURIN Institute of International Politics and Technology

Dmitry Kovchegin, Independent Consultant

Frans Mashilo, Head of Security, Council for Scientific and Industrial Research (CSIR)

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

Steve Nesbit, President, LMNT Consulting

Anita Nilsson, Executive Director, AN & Associates

Rajeswari Rajagopalan, Head, Nuclear and Space Policy Initiative, Observer Research Foundation

Nickolas Roth, Director, Nuclear Security Program, Stimson Center

Michael Rowland, Consultant, Practical Reason Inc.

Ta Minh Tuan, Associate Professor, Diplomatic Academy of Vietnam

Hui Zhang, Senior Research Associate, Belfer Center for Science and International Affairs, Harvard University

RADIOLOGICAL SECURITY EXPERTS

NTI and the EIU convened a separate group of experts to inform the development of the new Radioactive Source Security Assessment. The radiological security experts represented the scientific, technical, commercial, and regulatory communities involved in securing and using radioactive sources in various applications.

Tom Bielefeld, Nuclear Security Research and Consulting

Christopher Boyd, Consultant, Former Assistant Commissioner of NYC Department of Health

Nicholas Butler, Deputy Director, Office of Radiological Security, National Nuclear Security Administration

Martin Comben, General Manager, International Irradiation Association

Charles Ferguson, Director, Nuclear and Radiation Studies Board, The National Academies of Sciences, Engineering, and Medicine

Ourania (Rania) Kosti, Senior Program Officer, Nuclear and Radiation Studies Board, The National Academies of Sciences, Engineering, and Medicine

Pierre Legoux, Head of Programmes, World Institute for Nuclear Security

Frederic Morris, Research Scientist, Pacific Northwest National Laboratory

Anita Nilsson, Executive Director, AN & Associates

Nickolas Roth, Director, Nuclear Security Program, Stimson Center

Mary Vecellio, Research Associate, Partnerships in Proliferation Prevention, Stimson Center

Paul Wynne, Chairman, International Irradiation Association

TERRORISM EXPERTS

A third, smaller group of terrorism experts also was convened to provide input on adjustments to the indicator on non-state actors (Indicator 5.4).

Daniel Benjamin, Norman E. McCulloch Jr. Director, The John Sloan Dickey Center for International Understanding, Dartmouth College

Ambassador Susan Burk, Independent Consultant

Erin Miller, Principal Investigator, Global Terrorism Database, National Consortium for the Study of Terrorism and Responses to Terrorism (START), University of Maryland

Jeffrey Muller, CBRN Expert, Countering Terrorism Section, United Nations Office of Counter-Terrorism/ United Nations Counter-Terrorism Centre

Nickolas Roth, Director, Nuclear Security Program, Stimson Center

Anne Witkowsky, Consultant, Former Deputy Assistant Secretary of Defense for Stability and Humanitarian Affairs

About NTI and the EIU

NUCLEAR THREAT INITIATIVE

NTI is a nonpartisan, 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 INTELLIGENCE UNIT

The Economist Intelligence Unit (EIU) is the research arm of The Economist Group, publisher of *The Economist*. As the world's leading provider of country intelligence, the EIU helps governments, institutions, and businesses by providing timely, reliable, and impartial analysis of economic and development strategies. Through our public policy practice, we provide evidence-based research for policymakers and stakeholders seeking measurable outcomes in fields ranging from technology and finance to energy and health. We conduct research through interviews, regulatory analysis, quantitative modeling, and forecasting, and we display the results through interactive data visualization tools. Through a global network of more than 900 analysts and contributors, the EIU continuously assesses and forecasts political, economic, and business conditions in more than 200 countries.

www.eiu.com

Methodology FAQ

This appendix summarizes the methodology for the 2020 NTI Nuclear Security Index and the Radioactive Source Security Assessment. More detailed information is available in the full methodology appendix prepared by the Economist Intelligence Unit (EIU) at **www.ntiindex.org**.

THE NUCLEAR SECURITY INDEX

What are the three different rankings?

The NTI Nuclear Security Index is made up of three separate rankings. Two theft rankings assess nuclear security conditions in countries 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 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 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 do not have nuclear materials to secure, they play an important role 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 risk to their neighbors and countries in the region.
- **Sabotage—Protect Facilities:** The sabotage ranking assesses the nuclear security conditions in 46 countries and Taiwan 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 must have one of several types of nuclear facility where sabotage could result in a dangerous release of radiation that could cause serious health consequences.[30] 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.

[30] For more on the status of Belarus's nuclear power program and why it is not included in the sabotage ranking, see footnote 2 on page 30.

What are weapons-usable nuclear materials?

For purposes of the NTI Index, "weapons-usable nuclear materials" include highly enriched uranium (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 countries 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 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 is measured by the Nuclear Security Index?

The Nuclear Security Index assesses nuclear security conditions with respect to policies, actions, and other factors related to securing materials against theft, protecting nuclear facilities against sabotage, and supporting global nuclear security efforts. The Nuclear Security Index does not assess security for low-enriched uranium or the radioactive sources to build a dirty bomb. 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 or radiological materials.

NUCLEAR SECURITY INDEX METHODOLOGY

How is the Nuclear Security Index developed?

Development of the Nuclear Security Index is designed to be rigorous and transparent and to embrace an international perspective. To develop the Index, NTI and the EIU work closely with an International Panel of Experts to determine the framework: the categories, indicators, and subindicators that characterize a country'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, in conjunction with the International Panel of Experts.

The EIU 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.

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

NTI prioritizes openness throughout the Index process. The 48 countries and Taiwan with weapons-usable nuclear materials and/or nuclear facilities were offered briefings on the Nuclear Security Index at the beginning of the process. In addition, after researching and gathering data, NTI and the EIU provided the 48 countries and Taiwan the opportunity to review and comment on the EIU'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 48 countries and Taiwan, 27 took advantage of this opportunity.[31]

[31] Those 27 countries are Argentina, Australia, Belgium, Brazil, Canada, Chile, China, Czech Republic, Finland, France, Germany, Hungary, Italy, Japan, Mexico, Netherlands, Norway, Poland, Romania, Slovenia, South Korea, Sweden, Switzerland, Taiwan, the United Arab Emirates, the United Kingdom, and the United States.

How are scores calculated and what do they mean?

The overall score (0 to 100) for each country in the NTI 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 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 has perfect nuclear security conditions, and a score of 0 does not mean that a country 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 gathered?

The EIU employed country experts and regional specialists from its global network of more than 350 analysts and contributors. Most of the research was conducted between July 2019 and March 2020, although data were updated as late as April 1, 2020, as new information became available. Therefore, actions taken by countries after April 1, 2020, are not captured in this edition of the Nuclear Security Index.

What types of information were used to score countries?

In creating the Nuclear Security Index, the EIU relied 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, EIU proprietary country 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 the EIU 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 EIU methodology at www.ntiindex.org.

What changes have been made to the Nuclear Security Index?

The "About the Nuclear Security Index" section of this report outlines the key changes in the 2020 edition of the Nuclear Security Index, all of which are described in greater detail in the full EIU methodology at www.ntiindex.org. In addition to those changes to the framework, Jordan and the United Arab Emirates were added to the sabotage ranking. Jordan recently began operating a nuclear research reactor. The United Arab Emirates recently completed construction of its first nuclear power reactor, which is expected to become operational in 2020.

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, the EIU rescores countries in previous editions of the Nuclear Security 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 also are conducted as needed.

What other experts were consulted during the development of the Nuclear Security Index?

NTI and the EIU received input from the International Panel of Experts. In addition to the international panel, NTI and the EIU convened a group of experts to advise on the development of the Radioactive Source Security Assessment. A group of experts on terrorism also was consulted to assist the process of revising Indicator 5.4 on the Illicit Activities by Non-State Actors. Panel members, experts, and their roles are listed on pages 75–76.

RADIOACTIVE SOURCE SECURITY ASSESSMENT METHODOLOGY

What does the Radioactive Source Security Assessment measure?

The Radioactive Source Security Assessment is the first worldwide assessment of radiological security based on publicly available information. The 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 the country's laws and regulations, its support for global norms, its 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. 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 the EIU convened a group of experts 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 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, for this initial assessment, the EIU did not conduct in-depth country research into laws and regulations 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 2 radioactive sources in each country (information that is not publicly available) or other regulatory requirements that might exist in some countries (requiring in-depth country research), were not included in the assessment.

What types of information were used to measure country policies, commitments, and actions?

The EIU 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) EIU 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 there is a clear lack of publicly accessible data. The assessment's limited scope precluded in-depth research for each country 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, the assessment relied on those data. In those cases, an answer of "No" may indicate the unavailability of public information to that organization.

OTHER TOOLS AND RESOURCES

Where can I find all of the scores and data for the Nuclear Security Index and the Radioactive Source Security Assessment?

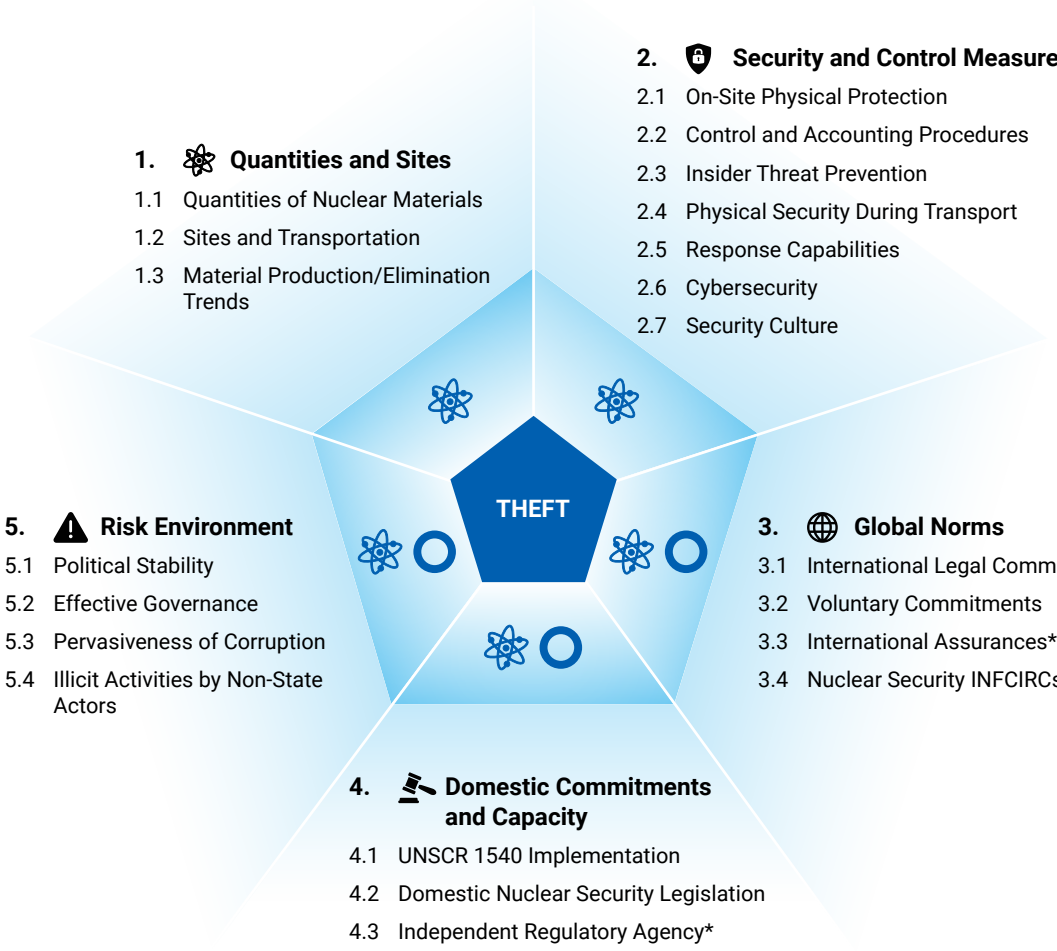
All information, including the report, the full EIU methodology, and the Excel models, are available on the NTI Index website, www.ntiindex.org. The website offers interactive viewing of the data for all three rankings of the Nuclear Security Index and the Radioactive Source Security Assessment, including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

The scores for the three rankings in the Nuclear Security Index are included in three models that are available as Excel workbooks that can be downloaded. The models offer a wide range of analytic tools, allowing a deeper investigation of measures of nuclear security globally. Users can filter countries by region, for example, or by membership in international organizations or multilateral initiatives. They also can compare two or more countries and can examine correlations between indicators. In-depth country profiles are included in the models to enable a deeper dive into a given country's nuclear security conditions.

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 that have adopted certain policies, commitments, or actions. Separate country pages allow the user to take a deeper dive into a given country's actions related to radiological security.

How the Theft Ranking Measures Nuclear Security Conditions



The theft ranking assesses countries with weapons-usable nuclear materials based on these five categories. Countries without materials were assessed on three categories.

KEY

Countries with weapons-usable nuclear materials

Countries without weapons-usable nuclear materials

*This indicator does not apply to countries without nuclear materials.

Note: For information about data sources used for scoring, see the full EIU Methodology at www.ntiindex.org.

FRAMEWORK FOR THEFT: SECURE MATERIALS

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 materials control and accounting	
2.2.2	Measurement methods	
2.2.3	Inventory record	

2.2.4	Material balance area(s)	
2.2.5	Control measures	
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	
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	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	
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	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 INFCIRCs** ***Countries that have subscribed to nuclear security IAEA Information Circulars (INFCIRCs) demonstrate a commitment to international best practices in nuclear security.***	**18%**
3.4.1	INFCIRC/869	
3.4.2	Other nuclear security INFCIRCs	
4	**DOMESTIC COMMITMENTS AND CAPACITY**	**19%**
4.1	**UNSCR 1540 Implementation** ***UN Security Council Resolution (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	
4.3	**Independent Regulatory Agency** ***A robust and independent regulatory structure helps to ensure compliance with nuclear security-related regulations.***	**41%**
4.3.1	Independent regulatory agency	

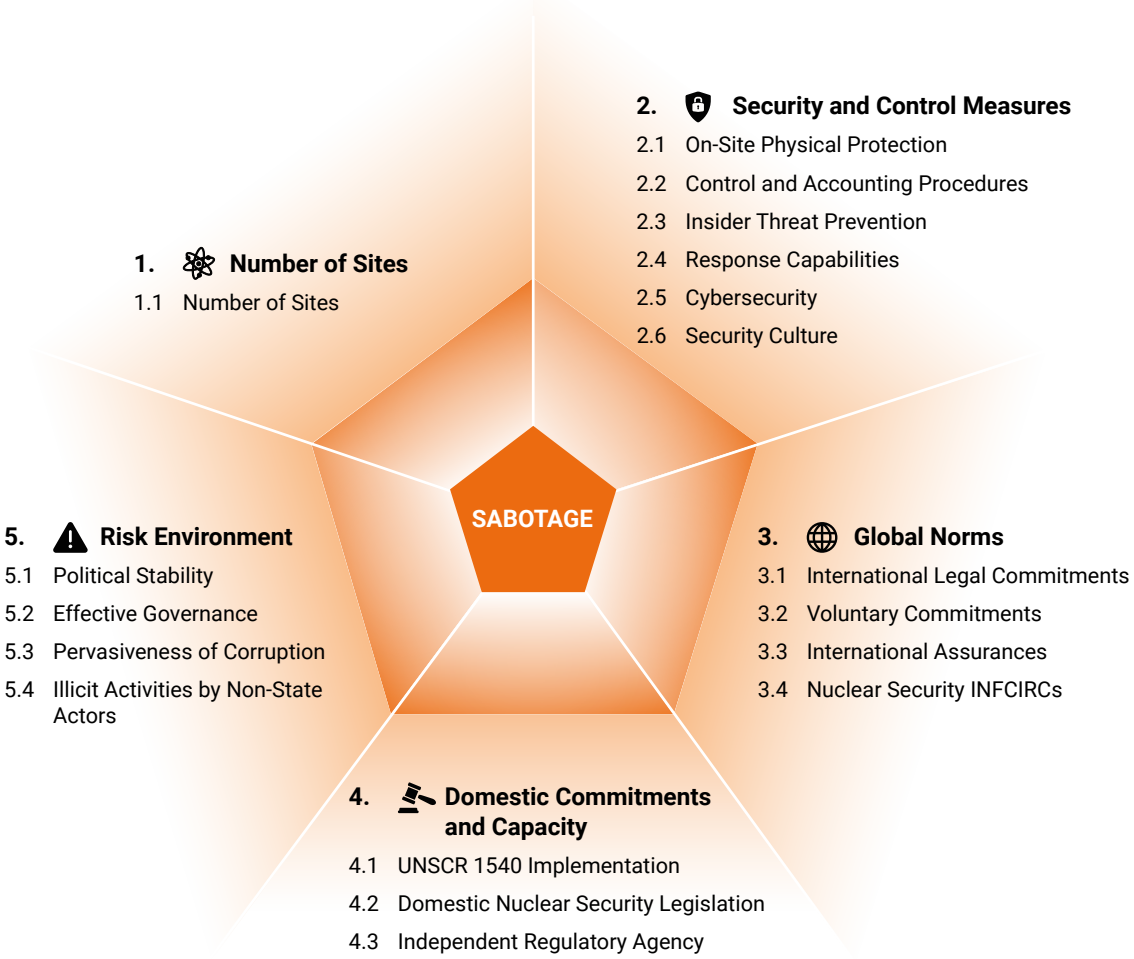
5	RISK ENVIRONMENT	16%
5.1	**Political Stability** ***A lack of political stability may enable lapses in nuclear security.***	**25%**
5.1.1	Social unrest	
5.1.2	Orderly transfers of power	
5.1.3	International disputes/tensions	
5.1.4	Armed conflict	
5.1.5	Violent demonstrations or violent civil/labor 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 raise 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	

FRAMEWORK FOR THEFT: SUPPORT GLOBAL EFFORTS

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	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	
3.2.8	Incident and Trafficking Database (ITDB)	
3.2.9	Nuclear Security Guidance Committee (NSGC)	
3.3	**Nuclear Security INFCIRCs** ***Countries that have subscribed to nuclear security IAEA Information Circulars (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	**UNSCR 1540 Implementation** ***UN Security Council Resolution (UNSCR) 1540 obliges action on nuclear materials security, and its implementation demonstrates a state's commitment level.***	**43%**

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 raise 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	

How the Sabotage Ranking Measures Nuclear Security Conditions



The sabotage ranking assesses countries with nuclear facilities based on these five categories.

Note: For information about data sources used for scoring, see the full EIU Methodology at www.ntiindex.org.

FRAMEWORK FOR SABOTAGE: PROTECT FACILITIES

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 materials control and accounting	
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	

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	

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	
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 INFCIRCs** ***Countries that have subscribed to nuclear security IAEA Information Circulars (INFCIRCs) demonstrate a commitment to international best practices in nuclear security.***	**18%**
3.4.1	INFCIRC/869	
3.4.2	Other nuclear security INFCIRCs	

4	**DOMESTIC COMMITMENTS AND CAPACITY**	**23%**
4.1	**UNSCR 1540 Implementation** ***UN Security Council Resolution (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 to 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	

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 raise 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

FRAMEWORK FOR RADIOLOGICAL

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 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 Summaries

This section includes country 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 materials and the sabotage ranking and therefore have two separate country summaries. 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. Country 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 results for the questions in the Radioactive Source Security Assessment. Individual country summaries for each of the 175 countries and Taiwan in that assessment are available at www.ntiindex.org.

THEFT: SECURE MATERIALS

AUSTRALIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
1	93	+1

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

	2020 Score	Change since 2018
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	**87**	**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	75	0
Security Culture	75	0
Global Norms	**96**	**+4**
International Legal Commitments	100	0
Voluntary Commitments	100	+17
International Assurances	85	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	**87**	**0**
Political Stability	85	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	75	0

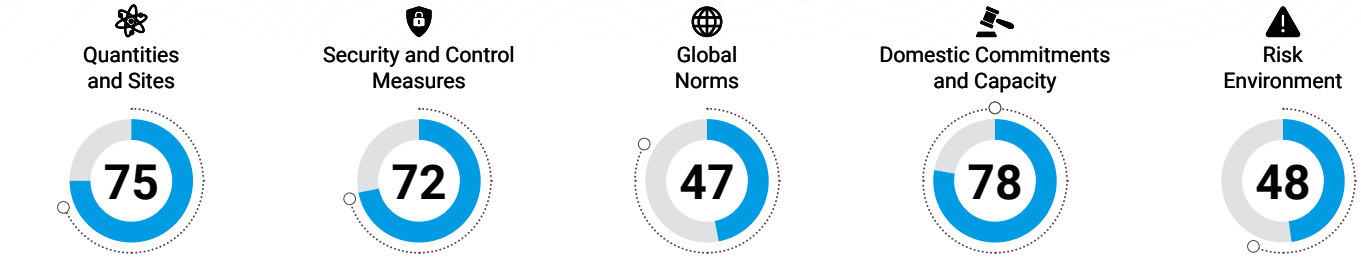
= denotes tie in rank

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

THEFT: SECURE MATERIALS

BELARUS

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=14	65	0



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

	2020 Score	Change since 2018
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	**47**	**0**
International Legal Commitments	71	0
Voluntary Commitments	50	-17
International Assurances	46	+15
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	**48**	**-2**
Political Stability	55	+5
Effective Governance	13	-12
Pervasiveness of Corruption	50	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

2020 RANK	2020 SCORE	CHANGE SINCE 2018
7	80	+3

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

	2020 Score	Change since 2018
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	**75**	**+8**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	55	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	50	+50
Security Culture	50	0
Global Norms	**93**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	92	0
Nuclear Security INFCIRCs	75	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	**71**	**+2**
Political Stability	75	0
Effective Governance	63	+13
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	70	-5

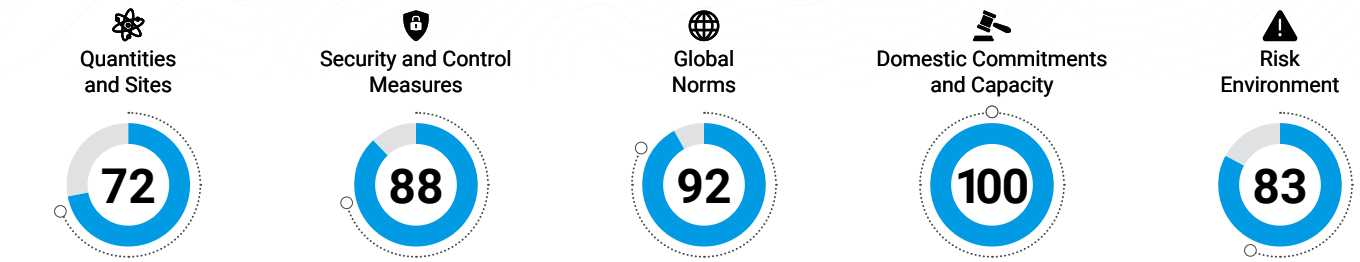
= denotes tie in rank

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

THEFT: SECURE MATERIALS

CANADA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=2	87	0



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

	2020 Score	Change since 2018
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	**88**	**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	88	0
Cybersecurity	75	0
Security Culture	75	0
Global Norms	**92**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	69	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	**83**	**0**
Political Stability	90	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	55	0

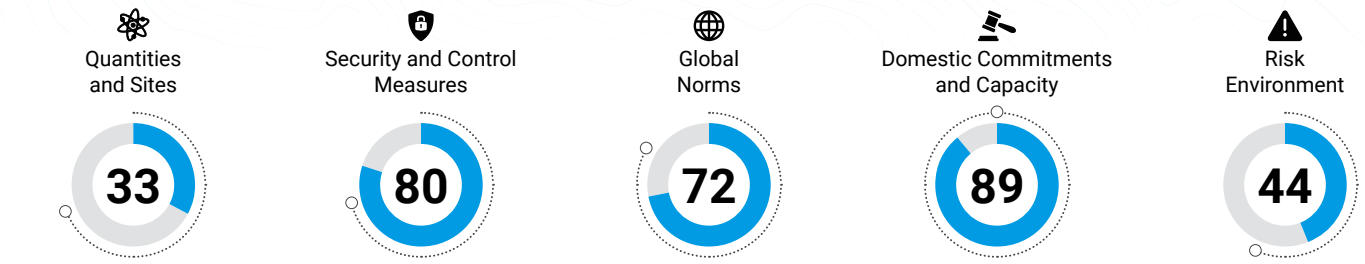
= denotes tie in rank

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

THEFT: SECURE MATERIALS

CHINA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=14	65	0



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

	2020 Score	Change since 2018
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	**72**	**-2**
International Legal Commitments	71	0
Voluntary Commitments	100	0
International Assurances	46	-8
Nuclear Security INFCIRCs	75	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	**44**	**+4**
Political Stability	55	+10
Effective Governance	50	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	45	+5

= denotes tie in rank

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

THEFT: SECURE MATERIALS

FRANCE

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=12	69	-1

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

	2020 Score	Change since 2018
Quantities and Sites	**33**	**0**
Quantities of Nuclear Materials	13	0
Sites and Transportation	25	0
Material Production/Elimination Trends	75	0
Security and Control Measures	**64**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	45	0
Physical Security During Transport	100	0
Response Capabilities	63	0
Cybersecurity	63	0
Security Culture	25	0
Global Norms	**84**	**0**
International Legal Commitments	71	0
Voluntary Commitments	100	0
International Assurances	77	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	**66**	**-6**
Political Stability	80	0
Effective Governance	75	-13
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	35	-10

= denotes tie in rank

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

THEFT: SECURE MATERIALS

GERMANY

2020 RANK	2020 SCORE	CHANGE SINCE 2018
4	85	+3

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

	2020 Score	Change since 2018
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	**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	100	0
Cybersecurity	63	0
Security Culture	50	0
Global Norms	**92**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	69	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	**81**	**+3**
Political Stability	80	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	55	+10

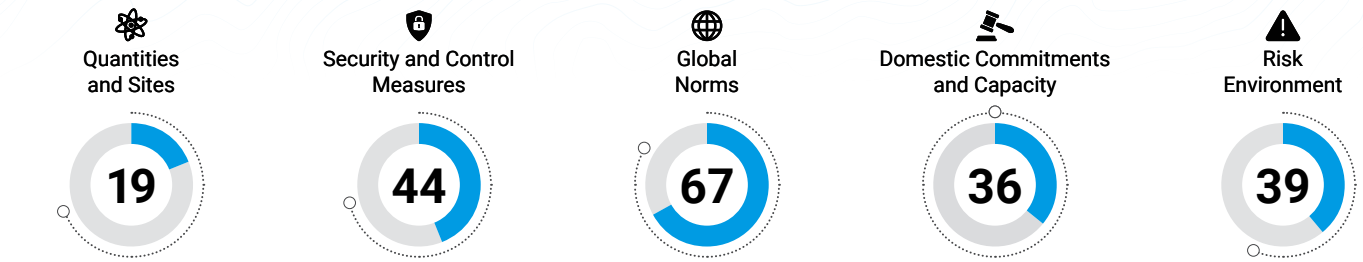
= denotes tie in rank

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

THEFT: SECURE MATERIALS

INDIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
20	41	0



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

	2020 Score	Change since 2018
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	**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	**67**	**0**
International Legal Commitments	71	0
Voluntary Commitments	100	0
International Assurances	31	0
Nuclear Security INFCIRCs	75	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	**39**	**+1**
Political Stability	65	0
Effective Governance	50	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	15	+5

= denotes tie in rank

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

THEFT: SECURE MATERIALS

IRAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
21	33	0

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

	2020 Score	Change since 2018
Quantities and Sites	**89**	**0**
Quantities of Nuclear Materials	88	0
Sites and Transportation	100	0
Material Production/Elimination Trends	75	0
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	**27**	**0**
International Legal Commitments	29	0
Voluntary Commitments	50	0
International Assurances	23	0
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**5**	**0**
UNSCR 1540 Implementation	20	0
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	0	0
Risk Environment	**18**	**-1**
Political Stability	20	-5
Effective Governance	38	0
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	15	0

= denotes tie in rank

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

THEFT: SECURE MATERIALS

ISRAEL

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=16	57	0

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

	2020 Score	Change since 2018
Quantities and Sites	**47**	**0**
Quantities of Nuclear Materials	50	0
Sites and Transportation	25	0
Material Production/Elimination Trends	75	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	**54**	**-3**
International Legal Commitments	57	0
Voluntary Commitments	67	-16
International Assurances	8	0
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	**48**	**-1**
Political Stability	55	0
Effective Governance	75	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	10	-5

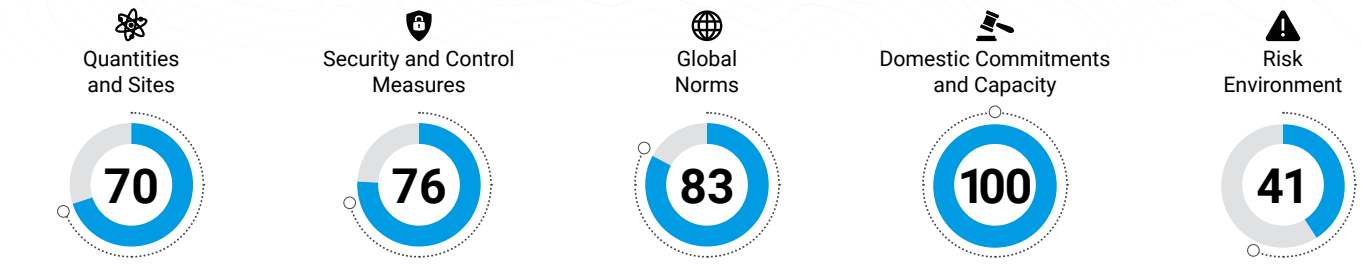
= denotes tie in rank

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

THEFT: SECURE MATERIALS

ITALY

2020 RANK	2020 SCORE	CHANGE SINCE 2018
11	75	0



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

	2020 Score	Change since 2018
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	**76**	**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	63	0
Security Culture	25	0
Global Norms	**83**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	38	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	**41**	**+4**
Political Stability	70	0
Effective Governance	38	0
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

JAPAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
8	77	-1

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

	2020 Score	Change since 2018
Quantities and Sites	**42**	**-6**
Quantities of Nuclear Materials	25	0
Sites and Transportation	38	0
Material Production/Elimination Trends	75	-25
Security and Control Measures	**74**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	70	0
Insider Threat Prevention	73	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	50	0
Security Culture	50	0
Global Norms	**96**	**+2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	85	+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	**75**	**0**
Political Stability	80	0
Effective Governance	75	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	70	0

= denotes tie in rank

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

THEFT: SECURE MATERIALS

KAZAKHSTAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=12	69	+1

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

	2020 Score	Change since 2018
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	**85**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	46	0
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	**36**	**+6**
Political Stability	55	0
Effective Governance	38	+13
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	25	+10

= denotes tie in rank

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

THEFT: SECURE MATERIALS

NETHERLANDS

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=5	82	+1

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

	2020 Score	Change since 2018
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	**74**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	55	0
Physical Security During Transport	100	0
Response Capabilities	63	0
Cybersecurity	75	0
Security Culture	50	0
Global Norms	**85**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	46	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	**81**	**+2**
Political Stability	80	0
Effective Governance	75	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	70	+10

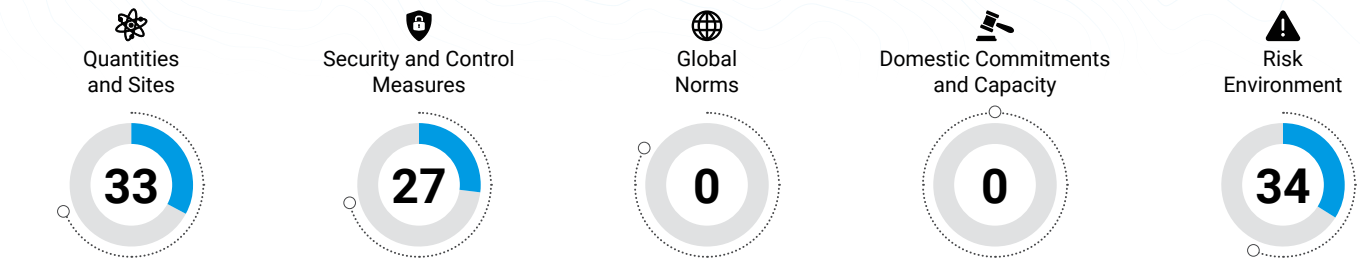
= denotes tie in rank

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

THEFT: SECURE MATERIALS

NORTH KOREA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
22	19	+1



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

	2020 Score	Change since 2018
Quantities and Sites	**33**	**0**
Quantities of Nuclear Materials	63	0
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	**0**	**0**
UNSCR 1540 Implementation	0	0
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	0	0
Risk Environment	**34**	**+5**
Political Stability	30	0
Effective Governance	25	+12
Pervasiveness of Corruption	0	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)

THEFT: SECURE MATERIALS

NORWAY

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=5	82	+4

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

	2020 Score	Change since 2018
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	**47**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	80	0
Insider Threat Prevention	18	0
Physical Security During Transport	50	0
Response Capabilities	63	0
Cybersecurity	38	0
Security Culture	25	0
Global Norms	**94**	**+4**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	77	+15
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	**94**	**+2**
Political Stability	100	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	90	+10

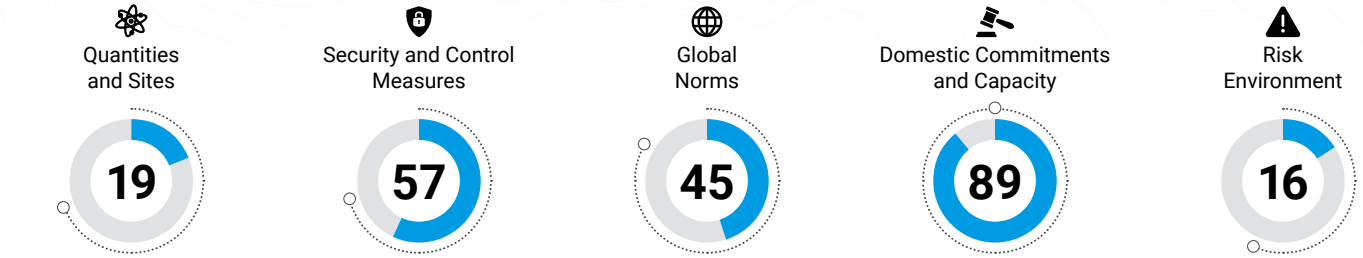
= denotes tie in rank

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

THEFT: SECURE MATERIALS

PAKISTAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
19	47	+7



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

	2020 Score	Change since 2018
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**	**+25**
On-Site Physical Protection	60	+20
Control and Accounting Procedures	40	+20
Insider Threat Prevention	27	0
Physical Security During Transport	100	+100
Response Capabilities	100	0
Cybersecurity	38	+25
Security Culture	50	+25
Global Norms	**45**	**+1**
International Legal Commitments	43	0
Voluntary Commitments	83	-17
International Assurances	31	0
Nuclear Security INFCIRCs	25	+25
Domestic Commitments and Capacity	**89**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	67	0
Independent Regulatory Agency	100	0
Risk Environment	**16**	**0**
Political Stability	15	0
Effective Governance	25	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	0	0

= denotes tie in rank

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

THEFT: SECURE MATERIALS

RUSSIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=16	57	+1

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

	2020 Score	Change since 2018
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	**56**	**+2**
International Legal Commitments	71	0
Voluntary Commitments	100	0
International Assurances	38	+7
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	**29**	**+3**
Political Stability	45	0
Effective Governance	38	+13
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	35	0

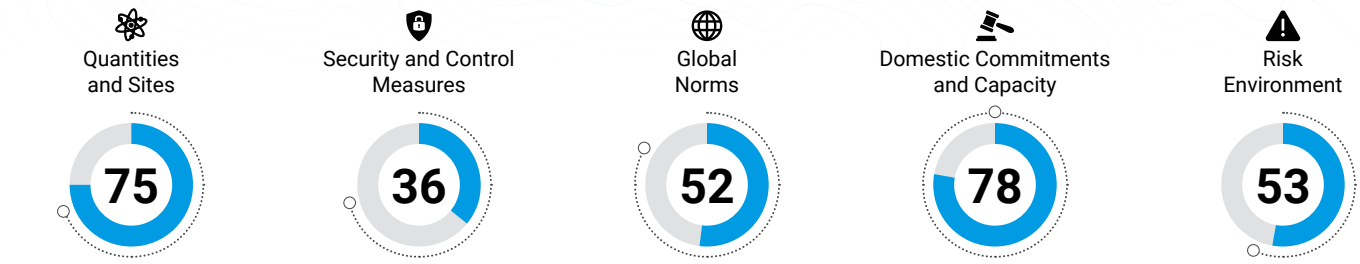
= denotes tie in rank

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

THEFT: SECURE MATERIALS

SOUTH AFRICA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=16	57	+1



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

	2020 Score	Change since 2018
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	**52**	**+2**
International Legal Commitments	86	0
Voluntary Commitments	50	+17
International Assurances	46	-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	**53**	**+4**
Political Stability	65	0
Effective Governance	50	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	45	+15

= denotes tie in rank

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

THEFT: SECURE MATERIALS

SWITZERLAND

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=2	87	+3

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

	2020 Score	Change since 2018
Quantities and Sites	**95**	**0**
● Quantities of Nuclear Materials	100	0
● Sites and Transportation	88	0
● Material Production/Elimination Trends	100	0
Security and Control Measures	**72**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	70	0
● Insider Threat Prevention	82	0
● Physical Security During Transport	100	0
● Response Capabilities	88	0
● Cybersecurity	50	0
● Security Culture	25	0
Global Norms	**87**	**+4**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	69	0
● Nuclear Security INFCIRCs	75	+25
Domestic Commitments and Capacity	**100**	**+11**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	100	+33
● Independent Regulatory Agency	100	0
Risk Environment	**88**	**0**
● Political Stability	85	0
● Effective Governance	75	0
● Pervasiveness of Corruption	100	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)

THEFT: SECURE MATERIALS

UNITED KINGDOM

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=9	76	0

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

	2020 Score	Change since 2018
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	100	0
Insider Threat Prevention	100	0
Physical Security During Transport	100	0
Response Capabilities	100	0
Cybersecurity	88	0
Security Culture	75	0
Global Norms	**92**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	69	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	**73**	**+5**
Political Stability	70	-5
Effective Governance	75	+12
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	45	+10

= denotes tie in rank

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

THEFT: SECURE MATERIALS

UNITED STATES

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=9	76	0

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

	2020 Score	Change since 2018
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	**96**	**-2**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	85	-7
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**	**+4**
Political Stability	75	0
Effective Governance	75	+12
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	25	0

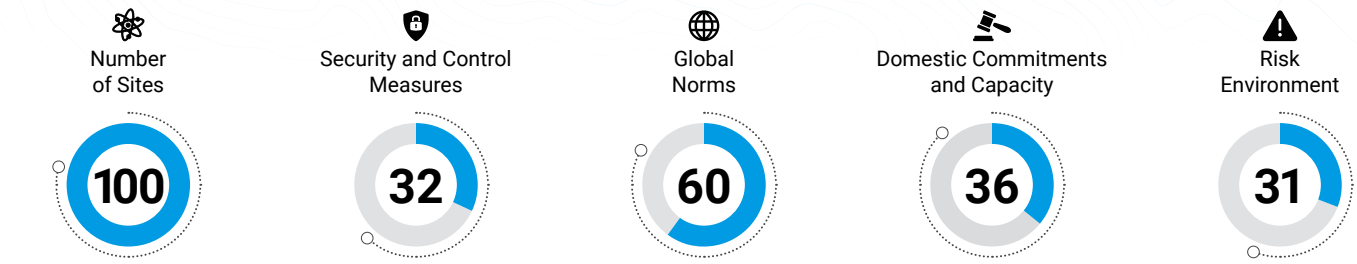
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

ALGERIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
44	42	-2



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

	2020 Score	Change since 2018
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	**60**	**-4**
International Legal Commitments	86	0
Voluntary Commitments	83	-17
International Assurances	33	0
Nuclear Security INFCIRCs	25	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	**31**	**-2**
Political Stability	30	-10
Effective Governance	38	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	30	0

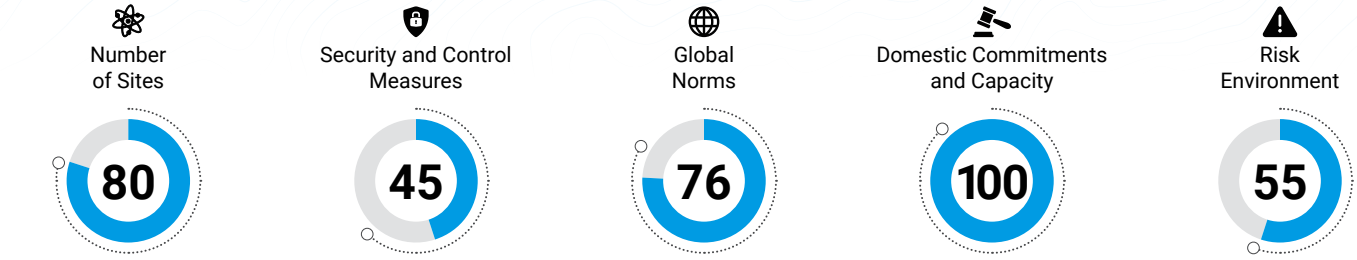
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

ARGENTINA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
27	68	-2



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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**45**	**0**
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	75	0
Global Norms	**76**	**-4**
International Legal Commitments	100	0
Voluntary Commitments	67	-16
International Assurances	56	0
Nuclear Security INFCIRCs	75	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**	**-3**
Political Stability	55	-5
Effective Governance	50	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	65	-5

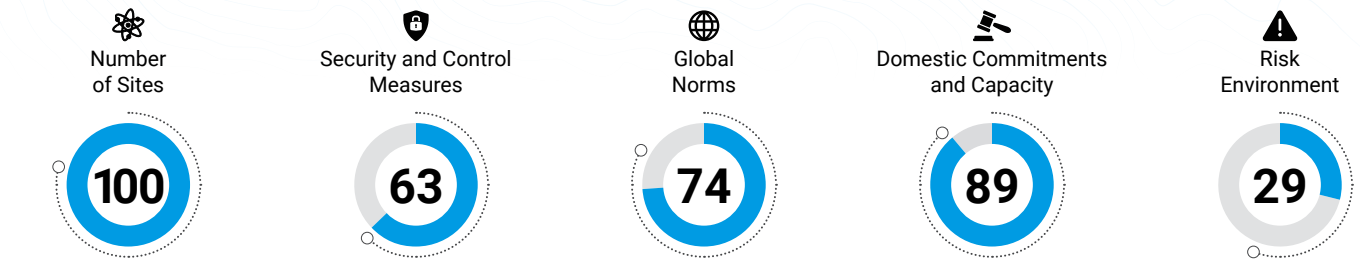
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

ARMENIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
28	67	0



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

	2020 Score	Change since 2018
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	**74**	**-3**
International Legal Commitments	100	0
Voluntary Commitments	50	0
International Assurances	44	-12
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	**29**	**+1**
Political Stability	40	0
Effective Governance	25	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	25	+5

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

AUSTRALIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
1	92	+1

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

	2020 Score	Change since 2018
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**87**	**0**
● On-Site Physical Protection	100	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	**94**	**+4**
● International Legal Commitments	100	0
● Voluntary Commitments	100	+17
● International Assurances	78	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	**87**	**0**
● Political Stability	85	0
● Effective Governance	88	0
● Pervasiveness of Corruption	100	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)

SABOTAGE: PROTECT FACILITIES

BANGLADESH

2020 RANK	2020 SCORE	CHANGE SINCE 2018
43	45	+1

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

	2020 Score	Change since 2018
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	**50**	**+4**
International Legal Commitments	100	0
Voluntary Commitments	50	+17
International Assurances	22	0
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**84**	**0**
UNSCR 1540 Implementation	80	0
Domestic Nuclear Security Legislation	67	0
Independent Regulatory Agency	100	0
Risk Environment	**21**	**-2**
Political Stability	50	+5
Effective Governance	25	-13
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	10	0

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

BELGIUM

2020 RANK	2020 SCORE	CHANGE SINCE 2018
16	80	+3

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

	2020 Score	Change since 2018
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**72**	**+9**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	55	0
Response Capabilities	100	0
Cybersecurity	50	+50
Security Culture	50	0
Global Norms	**93**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	89	0
Nuclear Security INFCIRCs	75	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	**71**	**+2**
Political Stability	75	0
Effective Governance	63	+13
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	70	-5

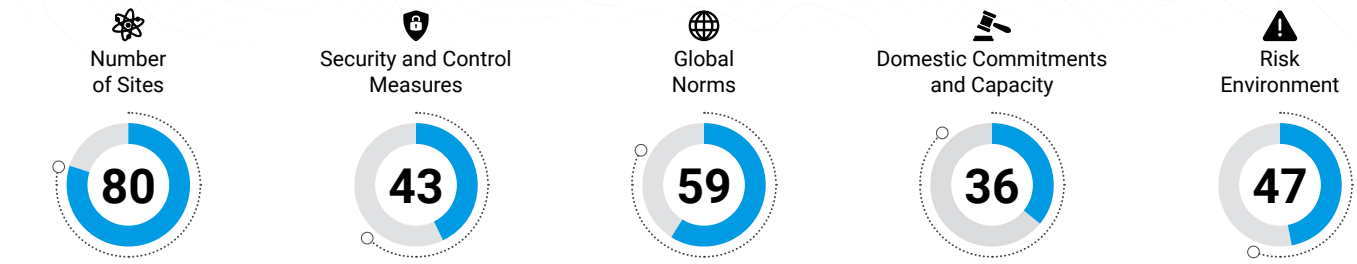
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

BRAZIL

2020 RANK	2020 SCORE	CHANGE SINCE 2018
42	47	0



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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**43**	**+7**
On-Site Physical Protection	60	+20
Control and Accounting Procedures	100	0
Insider Threat Prevention	18	0
Response Capabilities	63	+13
Cybersecurity	0	0
Security Culture	25	0
Global Norms	**59**	**-2**
International Legal Commitments	86	0
Voluntary Commitments	83	+16
International Assurances	44	-23
Nuclear Security INFCIRCs	0	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	**47**	**-4**
Political Stability	60	0
Effective Governance	38	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	65	-15

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

BULGARIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
21	75	+8

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

	2020 Score	Change since 2018
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**77**	**+16**
● On-Site Physical Protection	80	+20
● Control and Accounting Procedures	100	+12
● Insider Threat Prevention	82	+18
● Response Capabilities	100	+25
● Cybersecurity	50	0
● Security Culture	50	+25
Global Norms	**59**	**+4**
● International Legal Commitments	86	0
● Voluntary Commitments	83	+16
● International Assurances	44	0
● Nuclear Security INFCIRCs	0	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	**57**	**+1**
● Political Stability	75	0
● Effective Governance	38	0
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	90	+5

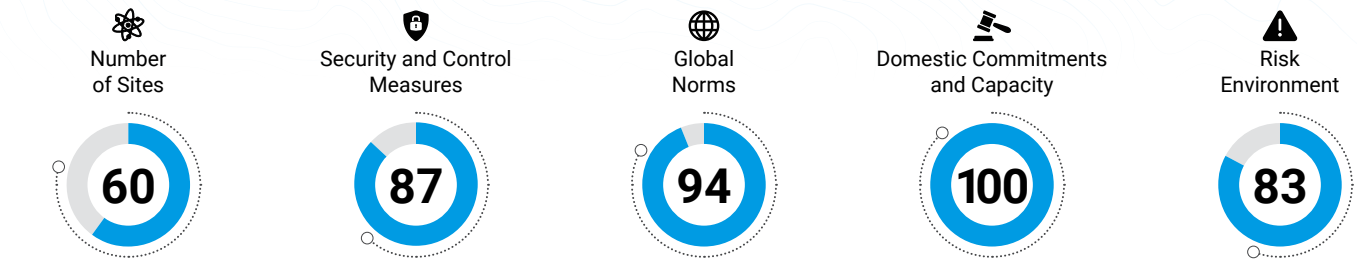
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

CANADA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
2	90	0



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

	2020 Score	Change since 2018
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**87**	**0**
On-Site Physical Protection	100	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	82	0
Response Capabilities	88	0
Cybersecurity	75	0
Security Culture	75	0
Global Norms	**94**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	78	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	**83**	**0**
Political Stability	90	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	55	0

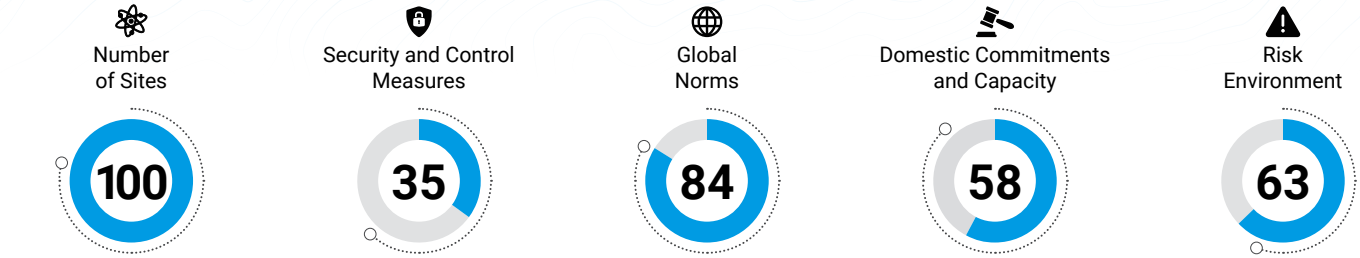
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

CHILE

2020 RANK	2020 SCORE	CHANGE SINCE 2018
32	60	+2



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

	2020 Score	Change since 2018
Number of Sites	**100**	**0**
Number of Sites	100	0
Security and Control Measures	**35**	**0**
On-Site Physical Protection	40	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	18	0
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	**58**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	0	0
Risk Environment	**63**	**-1**
Political Stability	75	0
Effective Governance	75	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	25	-5

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

CHINA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=22	74	+1

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

	2020 Score	Change since 2018
Number of Sites	**40**	**0**
Number of Sites	40	0
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	**84**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	56	0
Nuclear Security INFCIRCs	75	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	**44**	**+4**
Political Stability	55	+10
Effective Governance	50	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	45	+5

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

CZECH REPUBLIC

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=9	82	+1

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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**74**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	75	0
● Cybersecurity	63	0
● Security Culture	50	0
Global Norms	**84**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	83	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	**69**	**+1**
● Political Stability	75	0
● Effective Governance	50	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	100	+5

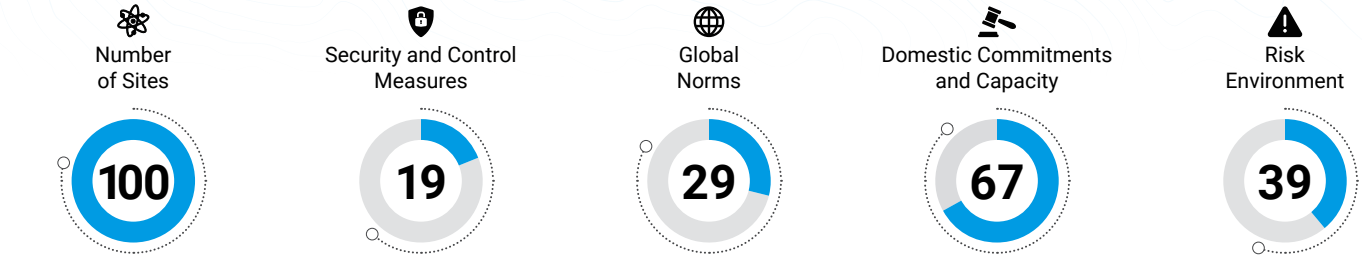
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

EGYPT

2020 RANK	2020 SCORE	CHANGE SINCE 2018
45	40	-2



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

	2020 Score	Change since 2018
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	**29**	**-4**
International Legal Commitments	29	0
Voluntary Commitments	50	-17
International Assurances	33	0
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**67**	**0**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	100	0
Risk Environment	**39**	**-5**
Political Stability	55	-10
Effective Governance	25	-13
Pervasiveness of Corruption	50	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

FINLAND

2020 RANK	2020 SCORE	CHANGE SINCE 2018
3	89	0

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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**86**	**+3**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	88	0
● Cybersecurity	88	0
● Security Culture	100	+25
Global Norms	**88**	**-3**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	56	-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	**82**	**-2**
● Political Stability	70	0
● Effective Governance	88	0
● Pervasiveness of Corruption	100	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

FRANCE

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=18	77	-1

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

	2020 Score	Change since 2018
Number of Sites	**20**	**0**
Number of Sites	20	0
Security and Control Measures	**59**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	45	0
Response Capabilities	63	0
Cybersecurity	63	0
Security Culture	25	0
Global Norms	**97**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	89	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	**66**	**-6**
Political Stability	80	0
Effective Governance	75	-13
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	35	-10

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

GERMANY

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=5	84	+3

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

	2020 Score	Change since 2018
Number of Sites	**40**	**0**
Number of Sites	40	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	100	0
Cybersecurity	63	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**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**81**	**+3**
Political Stability	80	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	55	+10

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

HUNGARY

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=5	84	-1

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

	2020 Score	Change since 2018
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	**85**	**-3**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	44	-12
● 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	**66**	**0**
● Political Stability	75	0
● 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

INDIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=38	53	0

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

	2020 Score	Change since 2018
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	**81**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	44	0
Nuclear Security INFCIRCs	75	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	**39**	**+1**
Political Stability	65	0
Effective Governance	50	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	15	+5

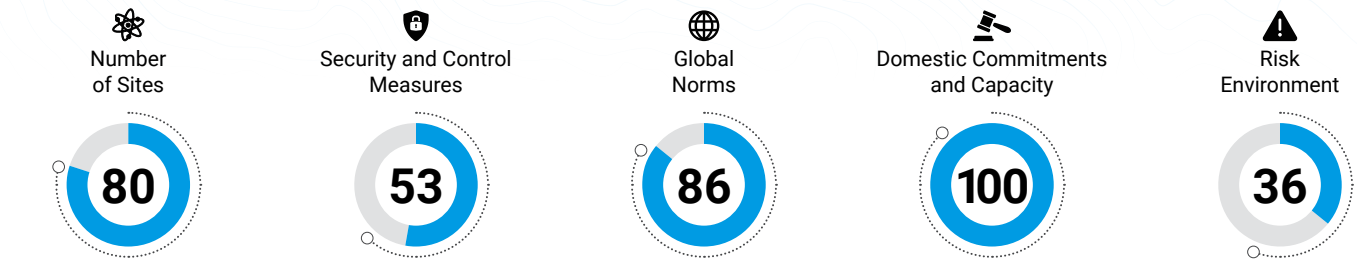
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

INDONESIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=25	69	0



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

	2020 Score	Change since 2018
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	27	0
● Response Capabilities	88	0
● Cybersecurity	13	0
● Security Culture	25	0
Global Norms	**86**	**+4**
● International Legal Commitments	100	0
● Voluntary Commitments	83	+16
● International Assurances	78	0
● Nuclear Security INFCIRCs	75	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	**36**	**-5**
● Political Stability	55	-5
● Effective Governance	25	-13
● 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

2020 RANK	2020 SCORE	CHANGE SINCE 2018
46	21	0

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

	2020 Score	Change since 2018
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	**14**	**0**
International Legal Commitments	0	0
Voluntary Commitments	50	0
International Assurances	11	0
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**15**	**0**
UNSCR 1540 Implementation	60	0
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	0	0
Risk Environment	**18**	**-1**
Political Stability	20	-5
Effective Governance	38	0
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	15	0

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

ISRAEL

2020 RANK	2020 SCORE	CHANGE SINCE 2018
31	61	-1

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

	2020 Score	Change since 2018
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	**59**	**-4**
● International Legal Commitments	71	0
● Voluntary Commitments	67	-16
● International Assurances	11	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	**48**	**-1**
● Political Stability	55	0
● Effective Governance	75	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	10	-5

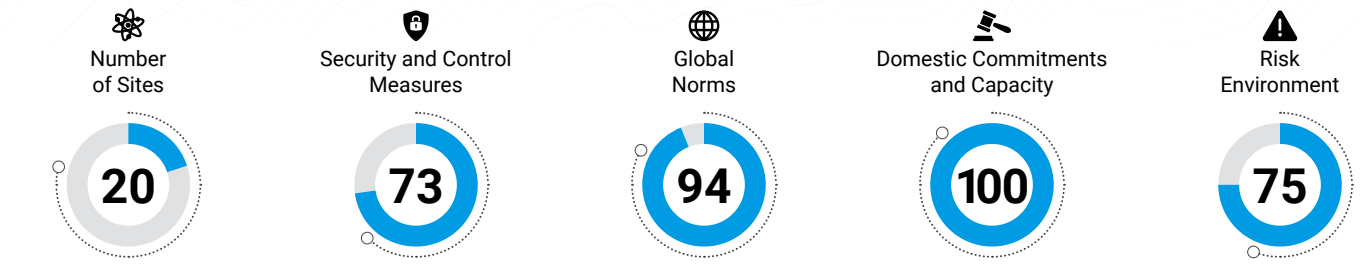
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

JAPAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=9	82	+1



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

	2020 Score	Change since 2018
Number of Sites	**20**	**0**
Number of Sites	20	0
Security and Control Measures	**73**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	88	0
Insider Threat Prevention	73	0
Response Capabilities	100	0
Cybersecurity	50	0
Security Culture	50	0
Global Norms	**94**	**+3**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	78	+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	**75**	**0**
Political Stability	80	0
Effective Governance	75	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	70	0

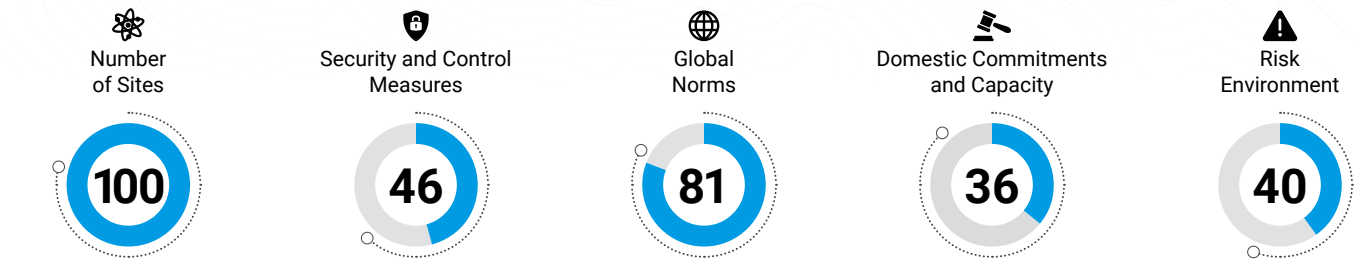
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

JORDAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=38	53	n/a



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

	2020 Score	Change since 2018
Number of Sites	**100**	**n/a**
Number of Sites	100	n/a
Security and Control Measures	**46**	**n/a**
On-Site Physical Protection	40	n/a
Control and Accounting Procedures	88	n/a
Insider Threat Prevention	0	n/a
Response Capabilities	25	n/a
Cybersecurity	88	n/a
Security Culture	50	n/a
Global Norms	**81**	**n/a**
International Legal Commitments	100	n/a
Voluntary Commitments	67	n/a
International Assurances	56	n/a
Nuclear Security INFCIRCs	100	n/a
Domestic Commitments and Capacity	**36**	**n/a**
UNSCR 1540 Implementation	100	n/a
Domestic Nuclear Security Legislation	33	n/a
Independent Regulatory Agency	0	n/a
Risk Environment	**40**	**n/a**
Political Stability	45	n/a
Effective Governance	50	n/a
Pervasiveness of Corruption	50	n/a
Illicit Activities by Non-State Actors	15	n/a

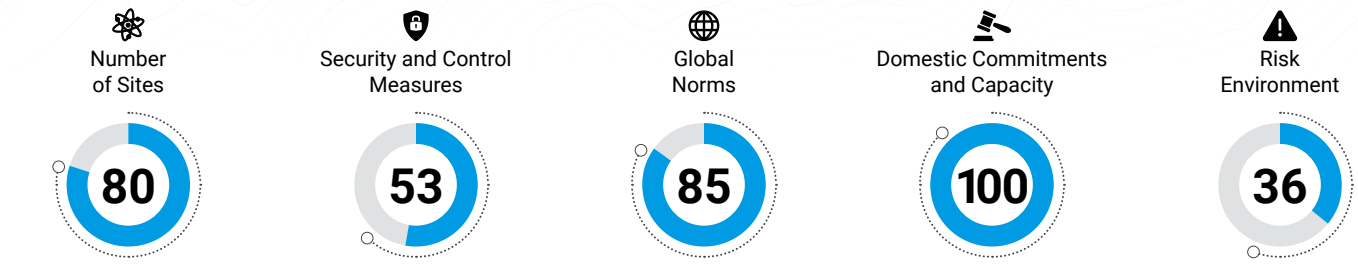
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

KAZAKHSTAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=25	69	+1



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

	2020 Score	Change since 2018
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	**85**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	44	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	**36**	**+6**
● Political Stability	55	0
● Effective Governance	38	+13
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	25	+10

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

MEXICO

2020 RANK	2020 SCORE	CHANGE SINCE 2018
37	54	+1

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

	2020 Score	Change since 2018
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	**94**	**+3**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	78	+11
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	**39**	**+1**
Political Stability	50	0
Effective Governance	50	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	30	+5

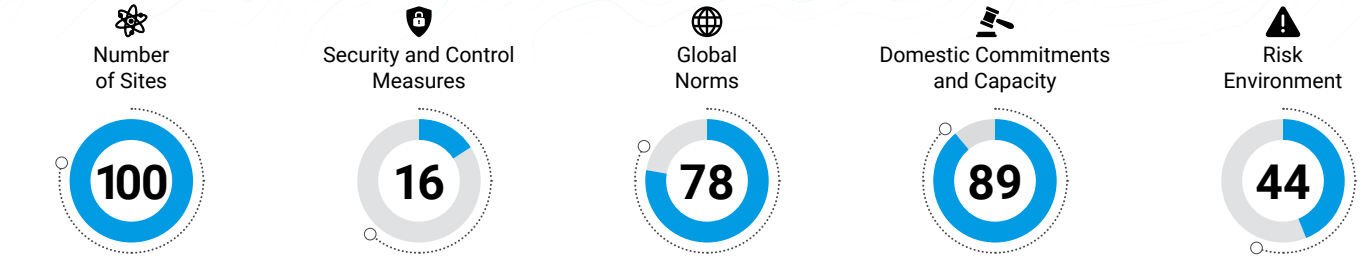
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

MOROCCO

2020 RANK	2020 SCORE	CHANGE SINCE 2018
34	57	+1



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

	2020 Score	Change since 2018
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	**78**	**+4**
● International Legal Commitments	100	+14
● Voluntary Commitments	83	0
● International Assurances	33	0
● 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	**44**	**-3**
● Political Stability	45	0
● Effective Governance	25	-13
● Pervasiveness of Corruption	25	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

NETHERLANDS

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=7	83	+1

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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**69**	**0**
● On-Site Physical Protection	80	0
● Control and Accounting Procedures	88	0
● Insider Threat Prevention	55	0
● Response Capabilities	63	0
● Cybersecurity	75	0
● Security Culture	50	0
Global Norms	**85**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	44	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	**81**	**+2**
● Political Stability	80	0
● Effective Governance	75	0
● Pervasiveness of Corruption	100	0
● Illicit Activities by Non-State Actors	70	+10

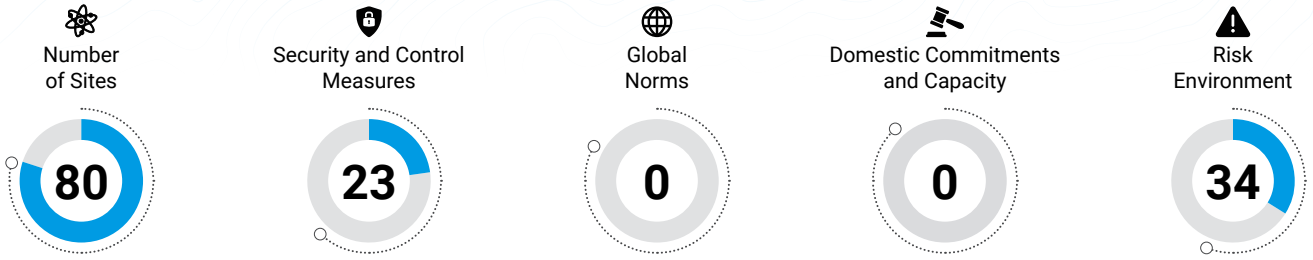
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

NORTH KOREA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
47	17	+1



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

	2020 Score	Change since 2018
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	**0**	**0**
UNSCR 1540 Implementation	0	0
Domestic Nuclear Security Legislation	0	0
Independent Regulatory Agency	0	0
Risk Environment	**34**	**+5**
Political Stability	30	0
Effective Governance	25	+12
Pervasiveness of Corruption	0	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

NORWAY

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=14	81	+3

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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**49**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	18	0
Response Capabilities	63	0
Cybersecurity	38	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	**94**	**+2**
Political Stability	100	0
Effective Governance	88	0
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	90	+10

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

PAKISTAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
33	58	+5

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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**56**	**+15**
● On-Site Physical Protection	60	+20
● Control and Accounting Procedures	75	+25
● Insider Threat Prevention	27	0
● Response Capabilities	100	0
● Cybersecurity	38	+25
● Security Culture	50	+25
Global Norms	**58**	**0**
● International Legal Commitments	71	0
● Voluntary Commitments	83	-17
● International Assurances	44	0
● Nuclear Security INFCIRCs	25	+25
Domestic Commitments and Capacity	**89**	**0**
● UNSCR 1540 Implementation	100	0
● Domestic Nuclear Security Legislation	67	0
● Independent Regulatory Agency	100	0
Risk Environment	**16**	**0**
● Political Stability	15	0
● Effective Governance	25	0
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	0	0

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

PERU

2020 RANK	2020 SCORE	CHANGE SINCE 2018
41	52	+1

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

	2020 Score	Change since 2018
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	**56**	**-3**
International Legal Commitments	100	0
Voluntary Commitments	50	0
International Assurances	44	-12
Nuclear Security INFCIRCs	0	0
Domestic Commitments and Capacity	**58**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	0	0
Risk Environment	**37**	**-4**
Political Stability	65	0
Effective Governance	38	0
Pervasiveness of Corruption	25	0
Illicit Activities by Non-State Actors	20	-15

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

POLAND

2020 RANK	2020 SCORE	CHANGE SINCE 2018
17	78	0

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

	2020 Score	Change since 2018
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**65**	**+4**
● On-Site Physical Protection	100	+20
● Control and Accounting Procedures	88	0
● Insider Threat Prevention	55	0
● Response Capabilities	75	0
● Cybersecurity	38	0
● Security Culture	25	0
Global Norms	**94**	**0**
● International Legal Commitments	100	0
● Voluntary Commitments	100	0
● International Assurances	78	0
● 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	**61**	**-4**
● Political Stability	65	0
● Effective Governance	50	0
● Pervasiveness of Corruption	50	0
● Illicit Activities by Non-State Actors	80	-15

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

ROMANIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=9	82	+1

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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
● Number of Sites	80	0
Security and Control Measures	**80**	**0**
● On-Site Physical Protection	60	0
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	73	0
● Response Capabilities	100	0
● Cybersecurity	100	0
● Security Culture	50	0
Global Norms	**90**	**+6**
● International Legal Commitments	100	0
● Voluntary Commitments	83	0
● International Assurances	78	+22
● 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**	**-1**
● Political Stability	80	+10
● Effective Governance	25	-13
● Pervasiveness of Corruption	25	0
● Illicit Activities by Non-State Actors	90	0

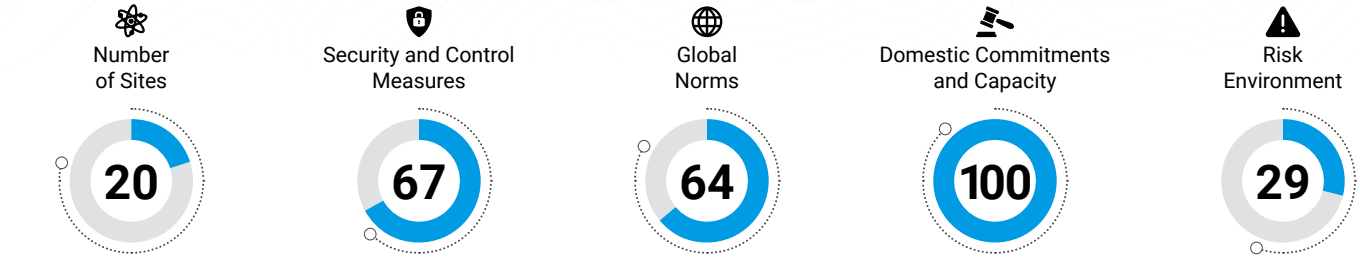
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

RUSSIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
30	64	+1



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

	2020 Score	Change since 2018
Number of Sites	**20**	**0**
Number of Sites	20	0
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	**64**	**+3**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	33	+11
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	**29**	**+3**
Political Stability	45	0
Effective Governance	38	+13
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

SLOVAKIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
24	73	+4

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

	2020 Score	Change since 2018
Number of Sites	**80**	**0**
Number of Sites	80	0
Security and Control Measures	**56**	**+4**
On-Site Physical Protection	80	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	55	0
Response Capabilities	50	0
Cybersecurity	38	+25
Security Culture	0	0
Global Norms	**63**	**+6**
International Legal Commitments	100	0
Voluntary Commitments	83	0
International Assurances	44	+22
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	**74**	**+4**
Political Stability	70	0
Effective Governance	63	+13
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	90	+5

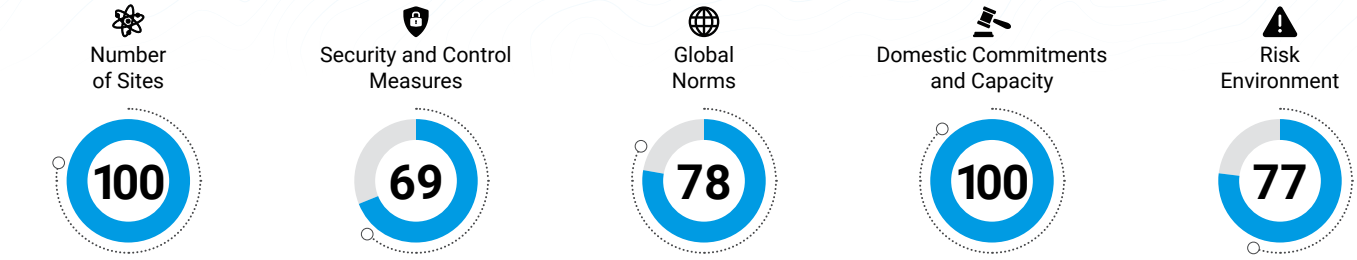
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

SLOVENIA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=14	81	+2



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

	2020 Score	Change since 2018
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**69**	**+4**
● On-Site Physical Protection	80	+20
● Control and Accounting Procedures	100	0
● Insider Threat Prevention	64	0
● Response Capabilities	88	0
● Cybersecurity	38	0
● Security Culture	50	0
Global Norms	**78**	**+3**
● International Legal Commitments	100	0
● Voluntary Commitments	67	-16
● International Assurances	78	+22
● Nuclear Security INFCIRCs	50	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	**77**	**+1**
● Political Stability	75	0
● Effective Governance	63	0
● Pervasiveness of Corruption	75	0
● Illicit Activities by Non-State Actors	95	+5

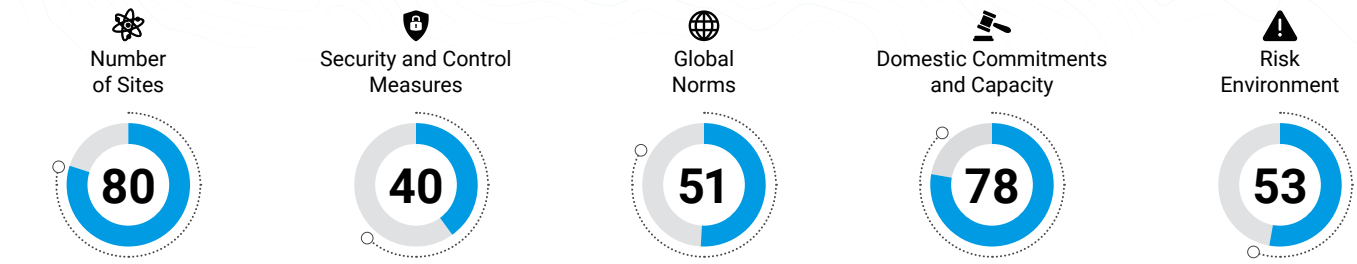
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

SOUTH AFRICA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
35	56	+1



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

	2020 Score	Change since 2018
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	**51**	**0**
International Legal Commitments	86	0
Voluntary Commitments	50	+17
International Assurances	44	-12
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	**53**	**+4**
Political Stability	65	0
Effective Governance	50	0
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	45	+15

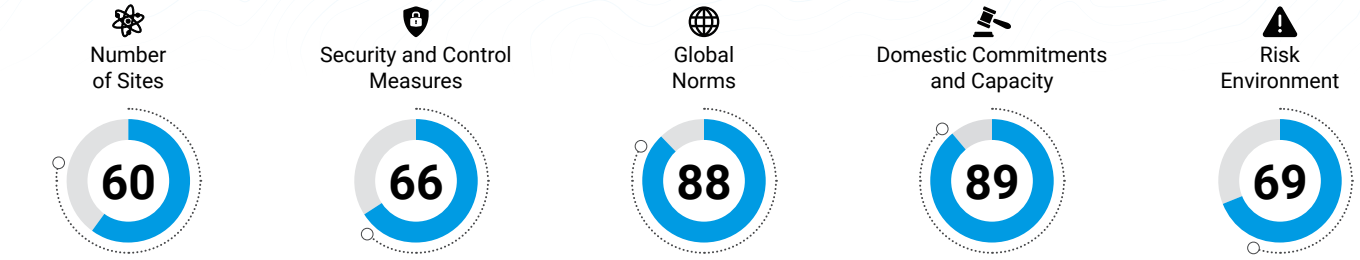
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

SOUTH KOREA

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=18	77	0



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

	2020 Score	Change since 2018
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**66**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	63	0
Insider Threat Prevention	45	0
Response Capabilities	88	0
Cybersecurity	88	0
Security Culture	25	0
Global Norms	**88**	**-3**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	56	-11
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	**69**	**+1**
Political Stability	50	-5
Effective Governance	88	+13
Pervasiveness of Corruption	50	0
Illicit Activities by Non-State Actors	90	0

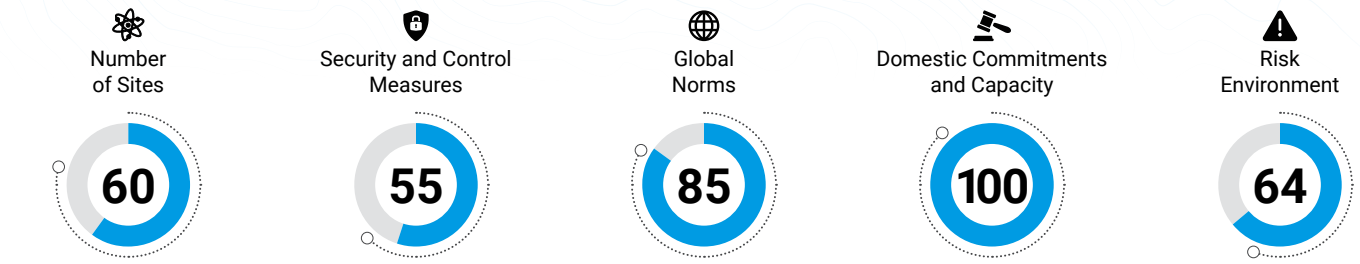
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

SPAIN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=22	74	0



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

	2020 Score	Change since 2018
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	**85**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	44	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	**64**	**+2**
Political Stability	75	0
Effective Governance	63	0
Pervasiveness of Corruption	50	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

SWEDEN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=9	82	+1

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

	2020 Score	Change since 2018
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**63**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	88	0
Insider Threat Prevention	45	0
Response Capabilities	88	0
Cybersecurity	50	0
Security Culture	25	0
Global Norms	**94**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	78	0
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	**94**	**+5**
Political Stability	90	0
Effective Governance	100	+12
Pervasiveness of Corruption	100	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

SWITZERLAND

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=9	82	+3

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

	2020 Score	Change since 2018
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**69**	**0**
On-Site Physical Protection	80	0
Control and Accounting Procedures	88	0
Insider Threat Prevention	73	0
Response Capabilities	88	0
Cybersecurity	50	0
Security Culture	25	0
Global Norms	**84**	**+5**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	56	0
Nuclear Security INFCIRCs	75	+25
Domestic Commitments and Capacity	**100**	**+11**
UNSCR 1540 Implementation	100	0
Domestic Nuclear Security Legislation	100	+33
Independent Regulatory Agency	100	0
Risk Environment	**88**	**0**
Political Stability	85	0
Effective Governance	75	0
Pervasiveness of Corruption	100	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

TAIWAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=38	53	0

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

	2020 Score	Change since 2018
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**68**	**+2**
On-Site Physical Protection	60	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	73	+9
Response Capabilities	63	0
Cybersecurity	100	0
Security Culture	25	0
Global Norms	**22**	**-3**
International Legal Commitments	29	0
Voluntary Commitments	17	0
International Assurances	33	-11
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	**76**	**-2**
Political Stability	65	0
Effective Governance	75	0
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	90	-5

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

UKRAINE

2020 RANK	2020 SCORE	CHANGE SINCE 2018
29	65	0

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

	2020 Score	Change since 2018
Number of Sites	**60**	**0**
Number of Sites	60	0
Security and Control Measures	**66**	**0**
On-Site Physical Protection	60	0
Control and Accounting Procedures	75	0
Insider Threat Prevention	45	0
Response Capabilities	88	0
Cybersecurity	50	0
Security Culture	100	0
Global Norms	**94**	**0**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	78	0
Nuclear Security INFCIRCs	100	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	**14**	**-2**
Political Stability	10	0
Effective Governance	13	-12
Pervasiveness of Corruption	0	0
Illicit Activities by Non-State Actors	35	+5

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

UNITED ARAB EMIRATES

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=18	77	n/a

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

	2020 Score	Change since 2018
Number of Sites	**100**	**n/a**
● Number of Sites	100	n/a
Security and Control Measures	**65**	**n/a**
● On-Site Physical Protection	60	n/a
● Control and Accounting Procedures	75	n/a
● Insider Threat Prevention	55	n/a
● Response Capabilities	88	n/a
● Cybersecurity	50	n/a
● Security Culture	75	n/a
Global Norms	**83**	**n/a**
● International Legal Commitments	100	n/a
● Voluntary Commitments	83	n/a
● International Assurances	67	n/a
● Nuclear Security INFCIRCs	75	n/a
Domestic Commitments and Capacity	**89**	**n/a**
● UNSCR 1540 Implementation	100	n/a
● Domestic Nuclear Security Legislation	67	n/a
● Independent Regulatory Agency	100	n/a
Risk Environment	**71**	**n/a**
● Political Stability	75	n/a
● Effective Governance	63	n/a
● Pervasiveness of Corruption	75	n/a
● Illicit Activities by Non-State Actors	70	n/a

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

UNITED KINGDOM

2020 RANK	2020 SCORE	CHANGE SINCE 2018
4	88	+1

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

	2020 Score	Change since 2018
Number of Sites	**40**	**0**
Number of Sites	40	0
Security and Control Measures	**95**	**0**
On-Site Physical Protection	100	0
Control and Accounting Procedures	100	0
Insider Threat Prevention	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	**73**	**+5**
Political Stability	70	-5
Effective Governance	75	+12
Pervasiveness of Corruption	100	0
Illicit Activities by Non-State Actors	45	+10

= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

UNITED STATES

2020 RANK	2020 SCORE	CHANGE SINCE 2018
=7	83	0

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

	2020 Score	Change since 2018
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	**94**	**-3**
International Legal Commitments	100	0
Voluntary Commitments	100	0
International Assurances	78	-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	**63**	**+4**
Political Stability	75	0
Effective Governance	75	+12
Pervasiveness of Corruption	75	0
Illicit Activities by Non-State Actors	25	0

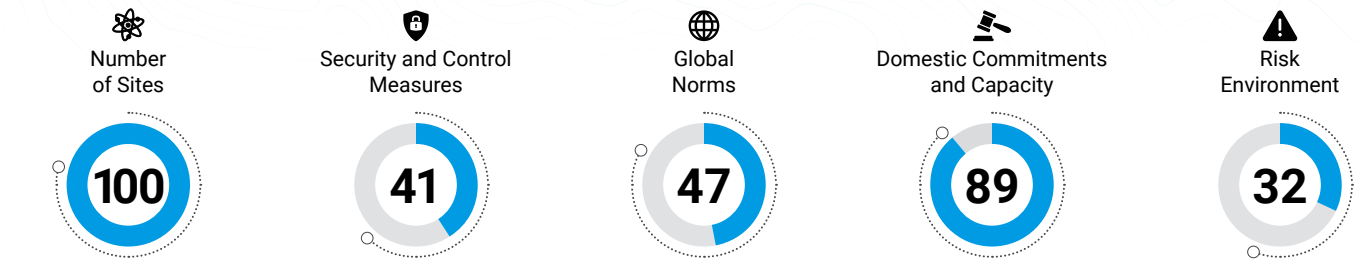
= denotes tie in rank

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

SABOTAGE: PROTECT FACILITIES

UZBEKISTAN

2020 RANK	2020 SCORE	CHANGE SINCE 2018
36	55	+2



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

	2020 Score	Change since 2018
Number of Sites	**100**	**0**
● Number of Sites	100	0
Security and Control Measures	**41**	**0**
● On-Site Physical Protection	60	0
● Control and Accounting Procedures	75	0
● Insider Threat Prevention	18	0
● Response Capabilities	75	0
● Cybersecurity	0	0
● Security Culture	25	0
Global Norms	**47**	**+3**
● International Legal Commitments	71	0
● Voluntary Commitments	67	+17
● International Assurances	33	0
● Nuclear Security INFCIRCs	0	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	**32**	**+3**
● Political Stability	50	0
● Effective Governance	13	+13
● Pervasiveness of Corruption	0	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)

COUNTRY RESULTS: RADIOLOGICAL

		Afghanistan
NATIONAL MEASURES		
Regulatory Oversight	Does the country 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 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 2018 International Conference on the Security of Radioactive Material?	No
International Conventions	Is the country a state party to the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)?	Yes
	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?	No
	Is the country 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 INFCIRC/910?	No
Implementation	Has the country publicly declared a regulatory requirement, policy, or commitment to implementing alternative technology to replace high-activity radioactive sources?	No or no data available
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?	No data
RISK ENVIRONMENT		
Political Stability	What is the risk of significant social unrest during the next two years?	Very high
	How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?	Two of the three criteria are absent
	Is there a risk that international disputes/tensions will negatively affect the polity during the next two years?	Very high
	Is this country 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's political system in formulating and executing policy?	No data
	What is the quality of the country's bureaucracy and its ability to carry out government policy?	Very low
Pervasiveness of Corruption	How pervasive is corruption among public officials?	Very 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?	Very high
	How many firearms were seized during the interdiction of illicit weapons trafficking?	No data

COUNTRY RESULTS: RADIOLOGICAL

Albania	Algeria	Angola	Argentina
Yes	Yes	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	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	No or no data available
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	No	No	Yes
No	Yes	No	Yes
Yes	No	No	Yes
Yes	Yes	No	Yes
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
60th–79th percentile	40th–59th percentile	60th–79th percentile	20th–39th percentile
20th–39th percentile	No data	Few people with degrees (0–19th percentile)	60th–79th 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
Moderate	Moderate	Moderate	Low
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
Moderate	High	Moderate	High
No data	Moderate	Low	Moderate
Low	Low	Low	Moderate
High	High	Very high	Moderate
Low	Moderate	Low	Low
High	Moderate	Low	Moderate
Moderate	Moderate	Very high	Very high

COUNTRY RESULTS: RADIOLOGICAL

		Armenia	Australia	Austria
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	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	Yes	No	No
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 or no data available	No or no data available	No or no data available
Capacity	Power outages	Infrequent power outages (0–19th percentile)	No data	No data
	Tertiary degrees	60th–79th percentile	Many people with degrees (80th–99th percentile)	60th–79th 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	Low
	Armed conflict	Sporadic and incursive conflict	No armed conflict exists	No armed conflict exists
	Violent demonstrations	Moderate	Low	Low
Effective Governance	Effectiveness of political system	No data	High	High
	Quality of bureaucracy	Low	Very high	High
Pervasiveness of Corruption	Pervasiveness of corruption	High	Very low	Low
Illicit Activities by Non-State Actors	Terrorism	Low	Low	Low
	Organized crime	Moderate	Low	Very low
	Illicit arms flows	No data	Very high	No data

COUNTRY RESULTS: 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	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	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 or no data available	No or no data available	No or no data available	No or no data available
20th–39th percentile	40th–59th percentile	No data	Frequent power outages (80th–99th percentile)
40th–59th percentile	40th–59th 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	Low
Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	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	No data	Moderate	Low
Low	Moderate	Moderate	Low
High	Very low	Moderate	Very high
Low	Very low	Moderate	Moderate
Moderate	Moderate	Very low	Moderate
Low	Low	No data	No data

COUNTRY RESULTS: RADIOLOGICAL

		Barbados	Belarus	Belgium
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	No or no data available
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	No or no data available
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	No	Yes	Yes
	Import Export Guidance	No	Yes	No
	Point of Contact	No	Yes	Yes
	Questionnaire	No	Yes	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	No	Yes	Yes
	Radioactive Material Conference	No	Yes	Yes
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 or no data available	No or no data available	No or no data available
Capacity	Power outages	20th–39th percentile	Infrequent power outages (0–19th percentile)	No data
	Tertiary degrees	No data	No data	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Low	Moderate
	Transfers of power	Very clear, established, and accepted	Not clear, established, or accepted	Clear, established, and accepted
	International disputes	No threat	High	Low
	Armed conflict	No armed conflict exists	No armed conflict exists	No armed conflict exists
	Violent demonstrations	Low	Low	Low
Effective Governance	Effectiveness of political system	No data	No data	High
	Quality of bureaucracy	Moderate	Low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	Moderate	Low
Illicit Activities by Non-State Actors	Terrorism	Very low	Low	Moderate
	Organized crime	Low	Moderate	Low
	Illicit arms flows	No data	Very high	High

COUNTRY RESULTS: RADIOLOGICAL

Belize	Benin	Bhutan	Bolivia
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	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	No	No	No
No	Yes	No	No
No	Yes	No	Yes
No	Yes	No	Yes
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
40th–59th percentile	Frequent power outages (80th–99th percentile)	Infrequent power outages (0–19th percentile)	20th–39th percentile
No data	No data	20th–39th percentile	40th–59th percentile
Moderate	High	Very low	High
One of the three criteria is absent	One of the three criteria is absent	Clear, established, and accepted	Two of the three criteria are absent
Moderate	High	Moderate	Low
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Moderate	Moderate	Very low	High
No data	No data	No data	No data
Low	Low	Moderate	Low
Moderate	High	Very low	High
Very low	Low	Very low	Low
Very high	Moderate	Low	High
No data	No data	No data	Low

COUNTRY RESULTS: RADIOLOGICAL

		Bosnia and Herzegovina	Botswana	Brazil
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	Yes	Yes
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	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	Yes	Yes	Yes
	Disused Sources Guidance	Yes	Yes	No
International Participation	GICNT	Yes	No	No
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	Yes	No	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	20th–39th 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	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	No data	No data	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

COUNTRY RESULTS: RADIOLOGICAL

Brunei	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	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	No or no data available	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	Yes	Yes	No
No	No	No	Yes
No	Yes	No	No
No	No	Yes	No
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
No data	20th–39th percentile	Frequent power outages (80th–99th percentile)	Frequent power outages (80th–99th percentile)
No data	60th–79th percentile	No data	Few people with degrees (0–19th percentile)
Very low	Moderate	High	High
Not clear, established, or accepted	Clear, established, and accepted	Two of the three criteria are absent	Not clear, established, or accepted
Low	Low	Moderate	Very high
No armed conflict exists	No armed conflict exists	Sporadic and incursive conflict	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
Very low	Low	High	High
No data	Moderate	No data	No data
Moderate	Low	Low	Low
Low	High	Moderate	Very high
Very low	Low	Very high	High
Very low	High	Moderate	High
No data	No data	Moderate	Very low

COUNTRY RESULTS: RADIOLOGICAL

		Cambodia	Cameroon	Canada
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	No or no data available	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	Yes	Yes
	Import Export Guidance	No	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	No	Yes	Yes
	Disused Sources Guidance	No	No	Yes
International Participation	GICNT	Yes	No	Yes
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	No	No	Yes
	Joint Convention	No	No	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	40th–59th percentile	Frequent power outages (80th–99th percentile)	No data
	Tertiary degrees	No data	No data	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	High	High	Very low
	Transfers of power	Two of the three criteria are absent	Not clear, established, or accepted	Very clear, established, and accepted
	International disputes	High	High	Low
	Armed conflict	No armed conflict exists	Sporadic and incursive conflict	No armed conflict exists
	Violent demonstrations	High	High	Low
Effective Governance	Effectiveness of political system	No data	No data	High
	Quality of bureaucracy	Very low	Low	Very high
Pervasiveness of Corruption	Pervasiveness of corruption	Very high	Very high	Very low
Illicit Activities by Non-State Actors	Terrorism	Low	High	Low
	Organized crime	High	High	Low
	Illicit arms flows	No data	Very low	Very high

COUNTRY RESULTS: RADIOLOGICAL

Cape Verde	Central African Republic	Chad	Chile
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	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	No or no data available	No or no data available
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	No	No	Yes
No	No	Yes	No
Yes	No	No	Yes
No	No	No	No
No	Yes	No	Yes
No	No	No	Yes
No	No	No	Yes
No	No	No	Yes
No or no data available	No or no data available	No or no data available	No or no data available
40th–59th percentile	Frequent power outages (80th–99th percentile)	60th–79th percentile	20th–39th percentile
20th–39th percentile	No data	Few people with degrees (0–19th percentile)	60th–79th percentile
Moderate	Very high	High	Moderate
Clear, established, and accepted	Two of the three criteria are absent	Not clear, established, or accepted	Very clear, established, and accepted
No threat	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	No armed conflict exists
Moderate	Very high	Moderate	Moderate
No data	No data	No data	High
Moderate	Very low	Very low	High
Low	Very high	Very high	Low
Very low	High	Very high	Low
Moderate	Very high	High	Low
Low	Low	No data	Very high

COUNTRY RESULTS: 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	Yes	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	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	No	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 or no data available	No or no data available	No or no data available
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	Moderate	No data
	Transfers of power	Two of the three criteria are absent	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	Low	No data
Effective Governance	Effectiveness of political system	Moderate	Moderate	No data
	Quality of bureaucracy	Moderate	Moderate	No data
Pervasiveness of Corruption	Pervasiveness of corruption	High	Moderate	No data
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	Moderate
	Organized crime	Moderate	High	High
	Illicit arms flows	No data	Very high	No data

COUNTRY RESULTS: RADIOLOGICAL

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

COUNTRY RESULTS: RADIOLOGICAL

		Croatia	Cuba	Cyprus
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	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	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	No
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 or no data available	No or no data available	No or no data available
Capacity	Power outages	20th–39th percentile	No data	No data
	Tertiary degrees	No data	20th–39th percentile	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	Moderate	Low
	Transfers of power	Clear, established, and accepted	Two of the three criteria are absent	Clear, established, and accepted
	International disputes	Moderate	High	Moderate
	Armed conflict	No armed conflict exists	No armed conflict exists	No armed conflict exists
	Violent demonstrations	Low	Low	Low
Effective Governance	Effectiveness of political system	Low	Moderate	Moderate
	Quality of bureaucracy	Low	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	Moderate	Low	Low
	Illicit arms flows	High	Very low	No data

COUNTRY RESULTS: RADIOLOGICAL

Czech Republic	Denmark	Djibouti	Dominican Republic
Yes	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
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	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	No
Yes	Yes	No	No
Yes	Yes	No	No
No	No	No	No
Yes	Yes	Yes	Yes
Yes	Yes	No	No
Yes	Yes	No	No
Yes	Yes	No	No
No or no data available	Yes	No or no data available	No or no data available
Infrequent power outages (0–19th percentile)	No data	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	Low
Clear, established, and accepted	Very clear, established, and accepted	Not clear, established, or accepted	One of the three criteria is absent
Moderate	Low	Moderate	Moderate
No armed conflict exists	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	No armed conflict exists
Low	Very low	Moderate	Moderate
Moderate	High	No data	Low
Moderate	High	Low	Low
Moderate	Low	High	High
Very low	Moderate	Moderate	Very low
Low	Very low	Moderate	Moderate
No data	Moderate	No data	High

COUNTRY RESULTS: RADIOLOGICAL

		Ecuador	Egypt	El Salvador
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	No or no data available	Yes
State Registry	Active registry	Yes	No or no data available	Yes
Inspection Authority	Inspection authority	Yes	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	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	Yes	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	20th–39th percentile	40th–59th percentile	20th–39th percentile
	Tertiary degrees	20th–39th percentile	No data	Few people with degrees (0–19th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	High	Moderate	Moderate
	Transfers of power	One of the three criteria is absent	Two of the three criteria are absent	Clear, established, and accepted
	International disputes	Low	Moderate	Low
	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	Low
Effective Governance	Effectiveness of political system	Low	Low	Low
	Quality of bureaucracy	Low	Low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	High	Moderate	High
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	Very low
	Organized crime	Moderate	Low	Very high
	Illicit arms flows	Very high	No data	Very high

COUNTRY RESULTS: RADIOLOGICAL

Equatorial Guinea	Eritrea	Estonia	Ethiopia
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	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	No or no data available
No	No	Yes	Yes
No	No	Yes	Yes
No	No	Yes	Yes
No	No	Yes	Yes
No	No	No	No
No	No	Yes	No
No	No	No	No
No	No	No	No
No	No	Yes	No
No	No	Yes	No
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
No data	Infrequent power outages (0–19th percentile)	20th–39th percentile	Frequent power outages (80th–99th percentile)
No data	No data	No data	No data
Moderate	Low	Moderate	High
Not clear, established, or accepted	Not clear, established, or accepted	Clear, established, and accepted	Not clear, established, or accepted
Moderate	High	High	Moderate
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic and incursive conflict	No armed conflict exists	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions
Moderate	Low	Moderate	High
No data	No data	Moderate	No data
Very low	Low	High	Low
Very high	Very high	Very low	High
Low	Moderate	Low	Moderate
Moderate	Low	Low	Low
No data	No data	No data	No data

COUNTRY RESULTS: RADIOLOGICAL

		Fiji	Finland	France
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	Yes	No or no data available
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	Yes
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	No	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	Yes	Yes
Implementation	Alternative technology commitment	No or no data available	Yes	Yes
Capacity	Power outages	40th–59th percentile	No data	No data
	Tertiary degrees	Few people with degrees (0–19th percentile)	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	No data	Moderate	Moderate
	Transfers of power	No data	Very clear, established, and accepted	Very clear, established, and accepted
	International disputes	No data	Moderate	Low
	Armed conflict	No data	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
	Violent demonstrations	No data	Low	Low
Effective Governance	Effectiveness of political system	No data	High	Moderate
	Quality of bureaucracy	No data	Very high	Very high
Pervasiveness of Corruption	Pervasiveness of corruption	No data	Very low	Low
Illicit Activities by Non-State Actors	Terrorism	No data	Low	Moderate
	Organized crime	Low	Very low	Low
	Illicit arms flows	No data	High	Low

COUNTRY RESULTS: RADIOLOGICAL

Gabon	Gambia	Georgia	Germany
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	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 or no data available	No or no data available	No or no data available	Yes
60th–79th percentile	Frequent power outages (80th–99th percentile)	20th–39th percentile	No data
No data	No data	60th–79th percentile	60th–79th percentile
High	Moderate	Moderate	Low
Two of the three criteria are absent	No data	One of the three criteria is absent	Very clear, established, and accepted
Low	No data	High	Moderate
No armed conflict exists	No data	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	No armed conflict exists
High	No data	Moderate	Low
No data	No data	No data	High
Low	No data	Moderate	Very high
High	No data	Low	Very low
Very low	Low	Low	Low
Moderate	Moderate	Low	Low
No data	No data	No data	No data

COUNTRY RESULTS: RADIOLOGICAL

		Ghana	Greece	Guatemala
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	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	No	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	Yes	Yes	No
International Conventions	ICSANT	No	No	Yes
	Joint Convention	Yes	Yes	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	Frequent power outages (80th–99th percentile)	20th–39th percentile	40th–59th percentile
	Tertiary degrees	No data	Many people with degrees (80th–99th percentile)	Few people with degrees (0–19th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	Moderate	High
	Transfers of power	Clear, established, and accepted	Very clear, established, and accepted	One of the three criteria is absent
	International disputes	Low	Moderate	Low
	Armed conflict	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
	Violent demonstrations	Low	Moderate	Moderate
Effective Governance	Effectiveness of political system	No data	Low	No data
	Quality of bureaucracy	Low	Moderate	Very low
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	High	High
Illicit Activities by Non-State Actors	Terrorism	Moderate	Moderate	Low
	Organized crime	Moderate	Moderate	Very high
	Illicit arms flows	Low	High	Very high

COUNTRY RESULTS: RADIOLOGICAL

Guinea	Guinea-Bissau	Guyana	Haiti
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	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	No	No	No
No	No	No	No
No	No	No	Yes
No	No	No	No
No	No	No	No
No	No	No	No
No	No	No	No
No	Yes	No	No
No	No	No	No
No	No	No	No
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
60th–79th percentile	60th–79th percentile	Frequent power outages (80th–99th percentile)	No data
Few people with degrees (0–19th percentile)	No data	No data	No data
High	No data	Moderate	High
One of the three criteria is absent	No data	Two of the three criteria are absent	Two of the three criteria are absent
Low	No data	High	Moderate
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No data	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
High	No data	Low	Very high
No data	No data	No data	No data
Very low	No data	Low	Very low
High	No data	Moderate	Very high
Moderate	No data	Very low	Low
High	Low	Moderate	Moderate
Very low	No data	Very low	No data

COUNTRY RESULTS: RADIOLOGICAL

		Honduras	Hungary	Iceland
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	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	Yes	Yes
	Radioactive Material Conference	No	Yes	No
International Conventions	ICSANT	No	Yes	No
	Joint Convention	No	Yes	Yes
	Convention on Assistance	No	No	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	Yes	No
Implementation	Alternative technology commitment	No or no data available	Yes	No or no data available
Capacity	Power outages	40th–59th percentile	Infrequent power outages (0–19th percentile)	No data
	Tertiary degrees	20th–39th percentile	60th–79th percentile	Many people with degrees (80th–99th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	High	Low	Very low
	Transfers of power	Two of the three criteria are absent	Clear, established, and accepted	Very clear, established, and accepted
	International disputes	Moderate	Moderate	No threat
	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	Very low
Effective Governance	Effectiveness of political system	No data	Moderate	No data
	Quality of bureaucracy	Low	Moderate	High
Pervasiveness of Corruption	Pervasiveness of corruption	High	Moderate	Low
Illicit Activities by Non-State Actors	Terrorism	Very low	Low	Very low
	Organized crime	High	Moderate	Very low
	Illicit arms flows	High	Low	No data

COUNTRY RESULTS: RADIOLOGICAL

India	Indonesia	Iran	Iraq
Yes	Yes	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	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	No	No	Yes
No	No	No	Yes
Yes	No	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	Yes
No	Yes	No	No
Yes	Yes	Yes	Yes
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
Frequent power outages (80th–99th percentile)	Infrequent power outages (0–19th percentile)	No data	Frequent power outages (80th–99th percentile)
20th–39th percentile	40th–59th percentile	40th–59th percentile	No data
Moderate	High	Very high	Very high
Very clear, established, and accepted	Clear, established, and accepted	Two of the three criteria are absent	Two of the three criteria are absent
Moderate	Moderate	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	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	Sporadic and incursive conflict
Moderate	Moderate	High	Very high
Moderate	Low	Moderate	No data
Moderate	Low	Low	Very low
High	High	Very high	Very high
Low	Moderate	Moderate	Very high
Moderate	Moderate	Low	Very high
No data	No data	No data	Very high

COUNTRY RESULTS: RADIOLOGICAL

		Ireland	Israel	Italy
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	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	Yes	No or no data available	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	No
	Point of Contact	Yes	Yes	Yes
	Questionnaire	Yes	No	No
	Disused Sources Guidance	Yes	No	No
International Participation	GICNT	Yes	Yes	Yes
	Radioactive Material Conference	No	Yes	Yes
International Conventions	ICSANT	No	No	Yes
	Joint Convention	Yes	No	Yes
	Convention on Assistance	Yes	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	Yes	Yes
Implementation	Alternative technology commitment	No or no data available	No or no data available	No or no data available
Capacity	Power outages	No data	Infrequent power outages (0–19th percentile)	No data
	Tertiary degrees	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Low	Moderate
	Transfers of power	Very clear, established, and accepted	Clear, established, and accepted	One of the three criteria is absent
	International disputes	Low	Very high	Low
	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	Low
Effective Governance	Effectiveness of political system	Moderate	High	Low
	Quality of bureaucracy	Moderate	High	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Low	Moderate	High
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	Moderate
	Organized crime	Moderate	Low	High
	Illicit arms flows	No data	No data	High

COUNTRY RESULTS: RADIOLOGICAL

Jamaica	Japan	Jordan	Kazakhstan
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	No or no data available	No or no data available	Yes
Yes	Yes	Yes	Yes
Yes	Yes	No or no data available	Yes
Yes	Yes	Yes	Yes
Yes	Yes	No	Yes
Yes	Yes	Yes	Yes
No	Yes	No	No
No	No	No	No
No	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	No	No	Yes
No or no data available	No or no data available	No or no data available	No or no data available
40th–59th percentile	No data	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)
Few people with degrees (0–19th 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	Two of the three criteria are absent	Not clear, established, or accepted
Low	Moderate	Very high	Moderate
No armed conflict exists	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists
Moderate	Low	Low	Low
No data	High	Moderate	Moderate
Moderate	High	Moderate	Low
Moderate	Low	Moderate	High
Very low	Low	Low	Moderate
Very high	Moderate	Moderate	Moderate
Moderate	Moderate	No data	High

COUNTRY RESULTS: RADIOLOGICAL

		Kenya	Kuwait	Kyrgyz Republic
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	Yes
Security Measures	Security requirement	Yes	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	Yes	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	Yes	Yes	Yes
	Questionnaire	Yes	No	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	No	No	Yes
	Radioactive Material Conference	Yes	Yes	No
International Conventions	ICSANT	Yes	Yes	Yes
	Joint Convention	No	No	Yes
	Convention on Assistance	No	Yes	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No or no data available	No or no data available	No or no data available
Capacity	Power outages	60th–79th percentile	No data	20th–39th percentile
	Tertiary degrees	No data	20th–39th percentile	40th–59th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Low	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	High	Moderate	Moderate
	Armed conflict	Incursive conflict; government remains in control, but opposition engages in frequent armed incursions	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
	Violent demonstrations	Moderate	Low	Moderate
Effective Governance	Effectiveness of political system	Low	Low	No data
	Quality of bureaucracy	Very low	Low	Very low
Pervasiveness of Corruption	Pervasiveness of corruption	Very high	Moderate	Very high
Illicit Activities by Non-State Actors	Terrorism	High	Moderate	Low
	Organized crime	High	Low	Very high
	Illicit arms flows	High	Very low	Very low

COUNTRY RESULTS: RADIOLOGICAL

Laos	Latvia	Lebanon	Lesotho
No or no data available	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	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	No
No	Yes	Yes	No
No	No	Yes	No
No	Yes	No	No
No	No	Yes	No
No	Yes	Yes	Yes
No	Yes	No	Yes
Yes	Yes	Yes	Yes
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)	Frequent power outages (80th–99th percentile)	40th–59th percentile
No data	60th–79th percentile	No data	No data
Low	Moderate	Very high	High
Not clear, established, or accepted	Clear, established, and accepted	Two of the three criteria are absent	Clear, established, and accepted
Low	High	Very high	High
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No armed conflict exists	Sporadic and incursive conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
Low	Moderate	Very high	High
No data	Moderate	No data	No data
Low	Moderate	Low	Low
Very high	Low	Very high	Moderate
Low	Low	High	Very low
Moderate	Low	High	High
No data	Very low	Moderate	No data

COUNTRY RESULTS: RADIOLOGICAL

		Liberia	Libya	Lithuania
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	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	Yes	Yes
	Import Export Guidance	No	Yes	Yes
	Point of Contact	No	Yes	Yes
	Questionnaire	No	Yes	Yes
	Disused Sources Guidance	No	No	No
International Participation	GICNT	No	Yes	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	Yes
Implementation	Alternative technology commitment	No or no data available	No or no data available	Yes
Capacity	Power outages	60th–79th percentile	No data	Infrequent power outages (0–19th percentile)
	Tertiary degrees	No data	No data	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Very high	Low
	Transfers of power	One of the three criteria is absent	Not clear, established, or accepted	Clear, established, and accepted
	International disputes	Low	Very high	High
	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	High	High	Low
Effective Governance	Effectiveness of political system	No data	Very low	Moderate
	Quality of bureaucracy	Very low	Very low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	High	Very high	Moderate
Illicit Activities by Non-State Actors	Terrorism	Moderate	Very high	Low
	Organized crime	Moderate	Very high	Low
	Illicit arms flows	No data	Low	Moderate

COUNTRY RESULTS: RADIOLOGICAL

Luxembourg	Macedonia	Madagascar	Malawi
Yes	Yes	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	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	Yes	Yes
Yes	Yes	No	Yes
Yes	Yes	Yes	No
No	No	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	No
Yes	Yes	Yes	No
Yes	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
No data	20th–39th percentile	60th–79th percentile	60th–79th percentile
Many people with degrees (80th–99th percentile)	No data	No data	No data
Very low	Moderate	Moderate	High
Very clear, established, and accepted	Two of the three criteria are absent	One of the three criteria is absent	One of the three criteria is absent
Moderate	Moderate	Low	Low
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
Very low	Moderate	High	High
No data	No data	No data	No data
High	Low	Low	Very low
Very low	High	Very high	Very high
Low	Moderate	Low	Very low
Low	High	Very high	Low
Moderate	Moderate	No data	No data

COUNTRY RESULTS: 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 or no data available	No or no data available	No or no data available
Capacity	Power outages	Infrequent power outages (0–19th percentile)	60th–79th percentile	No data
	Tertiary degrees	20th–39th percentile	Few people with degrees (0–19th percentile)	40th–59th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Moderate	Low
	Transfers of power	Clear, established, and accepted	One of the three criteria is absent	Clear, established, and accepted
	International disputes	Low	High	Low
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic and incursive conflict	No armed conflict exists
	Violent demonstrations	Low	High	Low
Effective Governance	Effectiveness of political system	High	No data	No data
	Quality of bureaucracy	Moderate	Very low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	High	Moderate
Illicit Activities by Non-State Actors	Terrorism	Low	Very high	Low
	Organized crime	Low	High	Low
	Illicit arms flows	No data	No data	No data

COUNTRY RESULTS: 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
No or no data available	Yes	Yes	No or no data available
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	No	No
No	Yes	Yes	No
No	No	Yes	Yes
Yes	No	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	No	No	No
No or no data available	No or no data available	No or no data available	Yes
60th–79th percentile	20th–39th percentile	40th–59th percentile	Infrequent power outages (0–19th percentile)
No data	20th–39th percentile	40th–59th percentile	40th–59th percentile
High	Low	Moderate	Moderate
Two of the three criteria are absent	Clear, established, and accepted	One of the three criteria is absent	Two of the three criteria are absent
Moderate	Low	High	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	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
High	Low	Moderate	Moderate
No data	No data	Moderate	No data
Low	Moderate	Moderate	Low
Very high	Moderate	High	High
Low	Low	Moderate	Very low
Moderate	Low	Very high	Very high
No data	Very low	Very high	Very low

COUNTRY RESULTS: RADIOLOGICAL

		Mongolia	Montenegro	Morocco
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	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	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	No	Yes	Yes
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	Yes
Implementation	Alternative technology commitment	No or no data available	No or no data available	No or no data available
Capacity	Power outages	20th–39th percentile	40th–59th percentile	20th–39th percentile
	Tertiary degrees	60th–79th percentile	No data	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	High	Moderate	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	Moderate	Moderate	Moderate
	Armed conflict	No armed conflict exists	No armed conflict exists	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	No data	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	No data	Moderate	Low

COUNTRY RESULTS: 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	Yes	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	No	No	No
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
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)	No data	No data	Few people with degrees (0–19th percentile)
High	Moderate	Low	High
Two of the three criteria are absent	Two of the three criteria are absent	One of the three criteria is absent	Clear, established, and accepted
Low	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	Moderate	Moderate	High
No data	No data	No data	No data
Low	Very low	Moderate	Very low
High	High	Moderate	High
Moderate	Moderate	Low	Moderate
High	High	Low	High
No data	Low	No data	Very low

COUNTRY RESULTS: 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	Yes	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	No data	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	Moderate	Very low	High
	Transfers of power	Very clear, established, and accepted	Very clear, established, and accepted	Not clear, established, or accepted
	International disputes	Low	Low	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	Very low	High
Effective Governance	Effectiveness of political system	High	Very high	No data
	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	High	No data	No data

COUNTRY RESULTS: RADIOLOGICAL

Niger	Nigeria	North Korea	Norway
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	No or no data available
Yes	Yes	No or no data available	Yes
Yes	Yes	No or no data available	No or no data available
Yes	Yes	No	Yes
Yes	No	No	Yes
Yes	Yes	Yes	Yes
Yes	No	No	Yes
No	Yes	No	No
No	Yes	No	Yes
Yes	Yes	No	No
Yes	Yes	No	Yes
Yes	Yes	No	Yes
Yes	Yes	No	No
No	No	No	Yes
No or no data available	No or no data available	No or no data available	Yes
Frequent power outages (80th–99th percentile)	Frequent power outages (80th–99th percentile)	No data	No data
Few people with degrees (0–19th percentile)	20th–39th percentile	No data	Many people with degrees (80th–99th percentile)
High	High	Moderate	Very low
Two of the three criteria are absent	Two of the three criteria are absent	Not clear, established, or accepted	Very clear, established, and accepted
High	Low	Very high	No threat
Sporadic and incursive conflict	Sporadic and incursive conflict	Sporadic and incursive conflict	No armed conflict exists
High	High	Low	Very low
No data	Low	No data	High
Low	Very low	Moderate	Very high
Moderate	Very high	Very high	Very low
Very high	High	Low	Low
Moderate	High	High	Very low
Very low	No data	No data	Low

COUNTRY RESULTS: RADIOLOGICAL

		Oman	Pakistan	Panama
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	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	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	No	Yes	Yes
	Point of Contact	Yes	Yes	Yes
	Questionnaire	No	No	Yes
	Disused Sources Guidance	No	Yes	No
International Participation	GICNT	No	Yes	Yes
	Radioactive Material Conference	No	Yes	No
International Conventions	ICSANT	No	No	Yes
	Joint Convention	Yes	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	No data	Frequent power outages (80th–99th percentile)	20th–39th percentile
	Tertiary degrees	20th–39th percentile	20th–39th percentile	40th–59th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	High	Moderate
	Transfers of power	Two of the three criteria are absent	One of the three criteria is absent	One of the three criteria is absent
	International disputes	Moderate	Very high	Moderate
	Armed conflict	No armed conflict exists	Territorial conflict; opposition has effective control over a region or regions	No armed conflict exists
	Violent demonstrations	Moderate	Very high	Low
Effective Governance	Effectiveness of political system	No data	Low	No data
	Quality of bureaucracy	Low	Low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	High	High
Illicit Activities by Non-State Actors	Terrorism	Low	Very high	Very low
	Organized crime	Very low	High	Moderate
	Illicit arms flows	No data	No data	High

COUNTRY RESULTS: RADIOLOGICAL

Papua New Guinea	Paraguay	Peru	Philippines
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	No or no data available	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	No	No	Yes
No	Yes	No	Yes
No	Yes	No	No
No	Yes	Yes	No
No	Yes	Yes	No
No	Yes	Yes	Yes
No	No	No	Yes
No or no data available	No or no data available	No or no data available	No or no data available
Frequent power outages (80th–99th percentile)	40th–59th percentile	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)
No data	20th–39th percentile	No data	40th–59th percentile
High	Moderate	Moderate	Moderate
Two of the three criteria are absent	Two of the three criteria are absent	Very clear, established, and accepted	Clear, established, and accepted
Moderate	No threat	Low	Moderate
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	Territorial conflict; opposition has effective control over a region or regions
High	Low	High	Moderate
No data	No data	Low	Low
Low	Low	Moderate	Moderate
Very high	High	High	Very high
Low	Low	Low	High
Moderate	Low	High	High
No data	Very low	Very high	Very low

COUNTRY RESULTS: RADIOLOGICAL

		Poland	Portugal	Qatar
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	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	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	No	No	No
International Participation	GICNT	Yes	Yes	No
	Radioactive Material Conference	Yes	No	No
International Conventions	ICSANT	Yes	Yes	Yes
	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	No or no data available	No or no data available	No or no data available
Capacity	Power outages	Infrequent power outages (0–19th percentile)	No data	No data
	Tertiary degrees	Many people with degrees (80th–99th percentile)	60th–79th percentile	40th–59th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Low	Low
	Transfers of power	Clear, established, and accepted	Clear, established, and accepted	One of the three criteria is absent
	International disputes	Moderate	Low	High
	Armed conflict	No armed conflict exists	No armed conflict exists	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence
	Violent demonstrations	Moderate	Very low	Low
Effective Governance	Effectiveness of political system	Moderate	Moderate	Moderate
	Quality of bureaucracy	Moderate	Moderate	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	Moderate	Low
Illicit Activities by Non-State Actors	Terrorism	Very low	Low	Low
	Organized crime	Low	Very low	Very low
	Illicit arms flows	High	High	Very low

COUNTRY RESULTS: RADIOLOGICAL

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

COUNTRY RESULTS: RADIOLOGICAL

		São Tomé and Príncipe	Saudi Arabia	Senegal
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	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	Yes	Yes
	Point of Contact	No	Yes	Yes
	Questionnaire	No	Yes	Yes
	Disused Sources Guidance	No	Yes	No
International Participation	GICNT	No	Yes	No
	Radioactive Material Conference	No	No	Yes
International Conventions	ICSANT	No	Yes	No
	Joint Convention	No	Yes	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	No data	No data	60th–79th percentile
	Tertiary degrees	Few people with degrees (0–19th percentile)	60th–79th percentile	Few people with degrees (0–19th percentile)
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Low	Moderate
	Transfers of power	Two of the three criteria are absent	One of the three criteria is absent	Clear, established, and accepted
	International disputes	Low	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	Low	Moderate
Effective Governance	Effectiveness of political system	No data	Low	No data
	Quality of bureaucracy	Low	Low	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	Moderate	Moderate
Illicit Activities by Non-State Actors	Terrorism	Very low	Moderate	Moderate
	Organized crime	Moderate	Low	Low
	Illicit arms flows	No data	No data	No data

COUNTRY RESULTS: RADIOLOGICAL

Serbia	Seychelles	Sierra Leone	Singapore
Yes	Yes	Yes	Yes
Yes	No or no data available	Yes	Yes
Yes	No or no data available	Yes	No or no data available
Yes	No or no data available	Yes	Yes
No or no data available	No or no data available	Yes	Yes
Yes	Yes	No	Yes
No	Yes	No	No
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	No
Yes	No	No	Yes
No	No	No	Yes
No or no data available	No or no data available	No or no data available	No or no data available
20th–39th percentile	No data	Frequent power outages (80th–99th percentile)	No data
40th–59th percentile	No data	No data	60th–79th percentile
Moderate	Moderate	Moderate	Very low
One of the three criteria is absent	Clear, established, and accepted	One of the three criteria is absent	Clear, established, and accepted
Moderate	Low	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	No armed conflict exists
Low	Low	Moderate	Very low
Low	No data	No data	Very high
Low	Moderate	Very low	Very high
High	Very low	High	Very low
Low	Very low	Moderate	Low
Moderate	Low	Moderate	Very low
High	No data	No data	No data

COUNTRY RESULTS: RADIOLOGICAL

		Slovakia	Slovenia	Solomon Islands
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	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	No
	Import Export Guidance	No	Yes	No
	Point of Contact	Yes	Yes	Yes
	Questionnaire	No	Yes	No
	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	Yes	No
	Convention on Assistance	Yes	Yes	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	Yes	No
Implementation	Alternative technology commitment	No or no data available	No or no data available	No or no data available
Capacity	Power outages	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)	60th–79th percentile
	Tertiary degrees	40th–59th percentile	40th–59th percentile	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	Moderate	No data
	Transfers of power	Clear, established, and accepted	Clear, established, and accepted	No data
	International disputes	Moderate	Low	No data
	Armed conflict	No armed conflict exists	No armed conflict exists	No data
	Violent demonstrations	Low	Low	No data
Effective Governance	Effectiveness of political system	High	Moderate	No data
	Quality of bureaucracy	Moderate	High	No data
Pervasiveness of Corruption	Pervasiveness of corruption	Low	Low	No data
Illicit Activities by Non-State Actors	Terrorism	Very low	Very low	No data
	Organized crime	Moderate	Low	Low
	Illicit arms flows	Moderate	Low	No data

COUNTRY RESULTS: RADIOLOGICAL

Somalia	South Africa	South Korea	Spain
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	No or no data available	No or no data available
No or no data available	Yes	Yes	Yes
No or no data available	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	No	No	Yes
No	No	Yes	Yes
No	No	Yes	No
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	No	Yes	Yes
No or no data available	No or no data available	No or no data available	No or no data available
No data	20th–39th percentile	No data	No data
No data	Few people with degrees (0–19th percentile)	60th–79th percentile	Many people with degrees (80th–99th percentile)
High	High	Moderate	Moderate
Two of the three criteria are absent	Clear, established, and accepted	Very clear, established, and accepted	Clear, established, and accepted
Very high	No threat	Very high	Low
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	No armed conflict exists
Very high	High	Moderate	Low
No data	Moderate	High	Moderate
Very low	Moderate	Very high	High
Very high	Moderate	Moderate	Moderate
Very high	Low	Very low	Low
Very high	High	Low	Low
No data	No data	No data	Very high

COUNTRY RESULTS: RADIOLOGICAL

		Sri Lanka	Sudan	Suriname
NATIONAL MEASURES				
Regulatory Oversight	Oversight body	Yes	Yes	No or no data available
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	Yes	No
	Import Export Guidance	Yes	Yes	No
	Point of Contact	Yes	Yes	No
	Questionnaire	Yes	Yes	No
	Disused Sources Guidance	No	Yes	No
International Participation	GICNT	Yes	No	No
	Radioactive Material Conference	Yes	Yes	No
International Conventions	ICSANT	Yes	No	No
	Joint Convention	No	No	No
	Convention on Assistance	Yes	No	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No or no data available	No or no data available	No or no data available
Capacity	Power outages	60th–79th percentile	40th–59th percentile	40th–59th percentile
	Tertiary degrees	No data	No data	20th–39th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	High	High	Moderate
	Transfers of power	Two of the three criteria are absent	Not clear, established, or accepted	One of the three criteria is absent
	International disputes	Low	High	Low
	Armed conflict	Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	Sporadic and incursive conflict	No armed conflict exists
	Violent demonstrations	Moderate	High	Low
Effective Governance	Effectiveness of political system	Moderate	No data	No data
	Quality of bureaucracy	Low	Low	Low
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	Very high	High
Illicit Activities by Non-State Actors	Terrorism	Moderate	Moderate	Very low
	Organized crime	Low	Moderate	Moderate
	Illicit arms flows	No data	Moderate	Low

COUNTRY RESULTS: RADIOLOGICAL

Swaziland	Sweden	Switzerland	Syria
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	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 or no data available
No	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	No
No	Yes	Yes	No
No	Yes	Yes	Yes
No	Yes	Yes	No
No or no data available	Yes	No or no data available	No or no data available
60th–79th percentile	No data	No data	No data
No data	Many people with degrees (80th–99th percentile)	Many people with degrees (80th–99th percentile)	No data
High	Low	Low	Very high
Two of the three criteria are absent	Very clear, established, and accepted	Very clear, established, and accepted	Not clear, established, or accepted
Moderate	Low	Moderate	Very high
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	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
No data	Very high	High	No data
Low	Very high	High	Very low
Moderate	Very low	Very low	Very high
Very low	Low	Very low	Very high
Low	Very low	Low	Very high
No data	Moderate	No data	No data

COUNTRY RESULTS: 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	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	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	No
	Disused Sources Guidance	No	Yes	No
International Participation	GICNT	No	Yes	No
	Radioactive Material Conference	No	No	Yes
International Conventions	ICSANT	No	No	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	No data	60th–79th percentile	Frequent power outages (80th–99th percentile)
	Tertiary degrees	No data	20th–39th percentile	No data
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	High	Moderate
	Transfers of power	Clear, established, and accepted	Not clear, established, or accepted	Two of the three criteria are absent
	International disputes	High	High	Low
	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	No data	No data
	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	Low
	Organized crime	Low	High	Moderate
	Illicit arms flows	No data	Very low	No data

COUNTRY RESULTS: 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	Yes	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
Infrequent power outages (0–19th percentile)	20th–39th percentile	60th–79th percentile	40th–59th percentile
20th–39th 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
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	No data
Moderate	Moderate	Very high	No data
Moderate	No data	No data	No data
Low	Very low	Very low	No data
High	High	High	No data
Moderate	Low	Low	No data
Moderate	Moderate	Moderate	Low
No data	No data	Low	No data

COUNTRY RESULTS: RADIOLOGICAL

		Trinidad and Tobago	Tunisia	Turkey
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	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	Yes	No or no data available	Yes
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	No
International Conventions	ICSANT	No	Yes	Yes
	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 or no data available	No or no data available	No or no data available
Capacity	Power outages	Infrequent power outages (0–19th percentile)	Infrequent power outages (0–19th percentile)	40th–59th percentile
	Tertiary degrees	Few people with degrees (0–19th percentile)	No data	60th–79th percentile
RISK ENVIRONMENT				
Political Stability	Social unrest	Moderate	High	High
	Transfers of power	Clear, established, and accepted	One of the three criteria is 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	Low	Very high	Moderate
Effective Governance	Effectiveness of political system	No data	Moderate	Moderate
	Quality of bureaucracy	Low	Moderate	Low
Pervasiveness of Corruption	Pervasiveness of corruption	Moderate	High	High
Illicit Activities by Non-State Actors	Terrorism	Low	High	Moderate
	Organized crime	High	Moderate	Moderate
	Illicit arms flows	Moderate	Moderate	High

COUNTRY RESULTS: 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	Yes	Yes	Yes
No or no data available	Yes	Yes	Yes
No or no data available	No or no data available	No or no data available	No or no data available
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	No
Yes	No	Yes	Yes
No	No	Yes	Yes
No	No	Yes	Yes
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
No data	60th–79th percentile	Infrequent power outages (0–19th percentile)	No data
No data	Few people with degrees (0–19th percentile)	No data	Many people with degrees (80th–99th percentile)
Moderate	High	Very high	Very low
Not clear, established, or accepted	Not clear, established, or accepted	Two of the three criteria are absent	Clear, established, and accepted
Moderate	High	Very high	Very high
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	Territorial conflict; opposition has effective control over a region or regions	No armed conflict exists
Low	Moderate	High	Very low
No data	No data	Very low	High
Very low	Low	Low	Moderate
Very high	Very high	Very high	Low
Low	High	Moderate	Low
Low	Low	High	Low
No data	No data	High	No data

COUNTRY RESULTS: RADIOLOGICAL

		United Kingdom	United States	Uruguay
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	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	No
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 or no data available
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	Moderate	Moderate	Low
	Transfers of power	Very clear, established, and accepted	Very clear, established, and accepted	Clear, established, and accepted
	International disputes	Moderate	Moderate	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	Low	Low	Low
Effective Governance	Effectiveness of political system	High	High	No data
	Quality of bureaucracy	High	High	Moderate
Pervasiveness of Corruption	Pervasiveness of corruption	Very low	Low	Low
Illicit Activities by Non-State Actors	Terrorism	Low	Moderate	Very low
	Organized crime	Low	Low	Low
	Illicit arms flows	Moderate	Very high	High

COUNTRY RESULTS: 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
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
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	No	Yes
Yes	No	No	Yes
Yes	No	No	Yes
No	No	No	Yes
No	No	No	No
No or no data available	No or no data available	No or no data available	No or no data available
60th–79th percentile	40th–59th percentile	40th–59th 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
Moderate	No data	Very high	Moderate
Sporadic conflict; government control is firm, but opposition engages in isolated incidents of violence	No data	Sporadic and incursive conflict	No armed conflict exists
Low	No data	Very high	Low
No data	No data	Very low	Moderate
Very low	No data	Very low	Low
Very high	No data	Very high	High
Moderate	No data	Moderate	Very low
Moderate	Low	Very high	Moderate
No data	No data	No data	No data

COUNTRY RESULTS: RADIOLOGICAL

		Yemen	Zambia	Zimbabwe
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	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	No	No
International Conventions	ICSANT	Yes	Yes	No
	Joint Convention	No	No	No
	Convention on Assistance	No	No	No
COMMITMENT AND CAPACITY TO ADOPT ALTERNATIVE TECHNOLOGIES				
Intent	INFCIRC/910	No	No	No
Implementation	Alternative technology commitment	No or no data available	No or no data available	No or no data available
Capacity	Power outages	Frequent power outages (80th–99th percentile)	60th–79th 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	High	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	Low	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	High	Very high
Effective Governance	Effectiveness of political system	No data	No data	No data
	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	Very high
	Illicit arms flows	No data	No data	No data

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

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- Explore how different actions would improve a country's score
- Compare country scores, ranks, and trends
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