GLOBAL DIALOGUE ON NUCLEAR SECURITY PRIORITIES

NUCLEAR SECURITY PRIMER: THE EXISTING SYSTEM

July 10, 2012

This Nuclear Security Primer provides an overview of the key agreements, guidelines, multilateral engagement mechanisms, and implementation services that make up today's nuclear security system. It also summarizes the benefits and limitations of each.

TABLE OF CONTENTS

II. MULTILATERAL ENGAGEMENT MECHANISMS

III. IMPLEMENTATION SERVICES

I. AGREEMENTS AND GUIDELINES

CONVENTION FOR THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL (CPPNM) AND 2005 AMENDMENT

Overview and Benefits

Physical protection of nuclear material, weapons, and facilities is the first line of defense against the unlawful acquisition of nuclear material by terrorists. The Convention on Physical Protection of Nuclear Materials (CPPNM) establishes the foundation for the physical protection of nuclear materials. It requires states to apply **measures of physical protection to nuclear material used for peaceful purposes during international transport**. The CPPNM also requires states to provide **cooperation and assistance in the case of theft of nuclear materials** to recover and protect the nuclear material, inform concerned states, and exchange information. It requires states to **criminalize certain offenses** related to the theft or unlawful possession of, and threats to use, nuclear material.

Recognizing the limited scope of the CPPNM (i.e., primarily to nuclear material in international transport), the **2005 Amendment** to the convention increased the scope of the CPPNM's coverage to require **physical protection measures on nuclear materials in use, storage, and domestic transit** and also protection of **nuclear facilities from sabotage**.

Disputes concerning interpretation and application of the treaty are referred to the International Court of Justice.

Limitations

- The CPPNM is **not universal**, having only 145 parties.
- The **2005 Amendment is not in force**. The amendment will enter into force when two-thirds of the states party to the CPPNM ratify the amendment. To date, only 56 out of the 145 states have ratified the amendment. Thus, the CPPNM's coverage currently does not extend to the physical protection of nuclear materials in domestic use or nuclear facilities.
- There is **no mechanism to enforce the treaty** or **monitor implementation**, and there are **no prescribed consequences** for non-compliance.
- There is **no mechanism to provide verification or assurances** to other countries through mandatory reporting or external review.

- Both the CPPNM and the 2005 Amendment define basic security levels, but **neither provides specific guidance on implementation**. Therefore, **variable implementation across states** may compromise achievement of CPPNM objectives.

UNITED NATIONS SECURITY COUNCIL RESOLUTION 1540

Overview and Benefits

UNSCR 1540 is binding on all members of the United Nations, making it the **only universal legally binding instrument requiring physical security measures** for nuclear material. Moreover, as the 2005 Amendment is not in force, UNSCR 1540 covers a **broader range of nuclear material than the CPPNM**.

UNSCR 1540 requires states to take measures to **prevent non-state actors from developing, acquiring, manufacturing, possessing, transporting, transferring, or using** nuclear, chemical, or biological weapons and their delivery systems. It requires states to **establish "appropriate effective" laws** to prohibit such acts and **appropriate controls, including appropriate effective security and accounting**, over related materials, to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery. The resolution also calls upon states to:

- **Promote the universal adoption**, as well as full implementation and strengthening, of multilateral treaties aimed at preventing the proliferation of nuclear, biological, or chemical weapons
- **Adopt national rules and regulations** to ensure compliance with their commitments under the key multilateral nonproliferation treaties
- Renew and fulfil their **commitment to multilateral cooperation**
- Develop appropriate ways to **work with and inform industry and the public** regarding their obligations under such laws.

Responsibility for managing the implementation of the resolution rests with the **1540 Committee**. States must report progress on their implementation of the resolution to the committee. Since the committee's inception, the UN Security Council has passed subsequent resolutions extending the committee's mandate. The most recent resolution, **UNSCR 1977**, adopted on April 20, 2011, **extended the mandate** for a period of ten years to 2021. It also **strengthened the committee's role** to facilitate the provision of technical assistance and to enhance cooperation with relevant organizations. The resolution also provided for two comprehensive reviews of the implementation of UNSCR 1540.

Limitations

- There is **no mechanism to enforce the resolution** beyond the UN Security Council, and there are **no consequences** for non-compliance.
- UNSCR 1540 **does not provide specific guidance on implementation**, including the definition of "appropriate effective."
- Although countries are required to submit reports to the 1540 Committee, **the reporting requirements are weak and ill-defined**. The content of the reports varies widely, and many of the reports are incomplete and provide inadequate detail. In addition, 26 countries have not submitted a report.
- The **1540 Committee is under-resourced and overburdened**. As such, UNSCR 1540 does not provide for a strong and reliable **mechanism or body to monitor implementation** or **provide verification or assurances** to other countries through mandatory reporting or external review.
- **Variable implementation across states** may compromise achievement of UNSCR 1540 objectives.

UNITED NATIONS SECURITY COUNCIL RESOLUTION 1373 AND INTERNATIONAL CONVENTION FOR THE SUPPRESSION OF ACTS OF NUCLEAR TERRORISM (ICSANT)

Overview and Benefits

The nuclear security system would be incomplete without a means of **deterring, preventing, and punishing** malicious acts, including acts of terrorism, using nuclear material. Following the events of 9/11, the UN Security Council, recognizing the threat of terrorism, passed **UNSCR 1373** requiring states to **take action to prevent terrorist attacks**, including by suppressing the financing of terrorist acts, criminalizing activity to finance terrorists, suppressing the provision of safe havens for terrorists, and providing other countries assistance in criminal investigations related to the financing or support of terrorist acts.

This resolution was a precursor for the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), the **first anti-terrorism treaty adopted after 9/11**. The treaty was designed **to strengthen the global legal framework for countering terrorist threats specifically involving radioactive materials and nuclear facilities**. ICSANT requires states to **criminalize and prosecute offenses** related to the use or possession of radioactive material and use or damage of a nuclear facility, or threats to do so. ICSANT also establishes a **legal framework for cooperation** among states to **detect, prevent, suppress, and investigate offenses**, and to institute **criminal proceedings** against alleged offenders by sharing information and assisting

one another in connection with criminal investigations and extradition proceedings. ICSANT **does not apply** when the offense occurs within a single state, is committed by a national of that state, and when no other state can claim jurisdiction over that offense.

ICSANT establishes a system of cooperation through which the global community can respond to the offenses set forth in the treaty and establish consequences for those who commit those offenses but does not describe how to prevent acts of nuclear terrorism.

Disputes concerning interpretation and application of the treaty are referred to the International Court of Justice.

Limitations

- ICSANT is **not universal**, having only 79 parties.
- There is **no mechanism to enforce the treaty or monitor implementation**, and there are **no consequences** for non-compliance.
- There is **no mechanism to provide verification or assurances** to other countries through mandatory reporting or external review.
- **Language on physical protection is limited**. For example, ICSANT states that parties "shall make every effort to adopt appropriate measures" to protect radioactive material and to "take into account" International Atomic Energy Agency (IAEA) recommendations.
- **Variable implementation across states** may compromise achievement of ICSANT objectives.

NUCLEAR SECURITY RECOMMENDATIONS ON PHYSICAL PROTECTION OF NUCLEAR MATERIAL AND NUCLEAR FACILITIES (INFCIRC/225/REV. 5)

Overview and Benefits

While the CPPNM, its 2005 Amendment, and UNSCR 1540 require states to apply physical protection measures, they do not provide specific guidance on implementation. The **IAEA** has attempted to fill this gap and now plays an **increasingly important and unique role in the nuclear security system** beyond its original safeguards mandate.

INFCIRC/225 is the primary IAEA document that provides **guidelines and recommendations for the physical protection of nuclear material and facilities**, measures against **unauthorized removal** of nuclear materials, and protection of nuclear material or facilities against **sabotage**. The protections apply to nuclear material in use and storage and during transport. INFCIRC/225

provides **basic international guidance** for physical protection of nuclear material and facilities. Some states, however, have national protection measures that go beyond what is contained in INFCIRC/225.

INFCIRC/225 was created when the Director General of the IAEA convened an international group of experts to draft guidelines for the protection of nuclear materials. These recommendations were revised and published as the first iteration of INFCIRC/225 in 1975. It has since undergone revisions in 1977, 1989, 1993, 1999, and most recently in 2011. The **latest revision was made to reflect contemporary threats,** such as terrorism, and the need to align the document with the 2005 Amendment to the CPPNM.

The IAEA also offers **implementation guides** to support the recommendations and takes INFCIRC/225 into account as a basis for evaluation during the provision of advisory services (discussed below).

Limitations

- INFCIRC/225 is **non-binding** and **does not provide clear performance objectives** or any **performance criteria** for ensuring that all states consistently meet a minimum standard or best practice**.**
- There is **no mechanism to provide verification or assurances** to other countries that states are meeting INFCIRC/225 recommendations through mandatory reporting or external review.
- **Variable implementation across states** may compromise achievement of INFCIRC/225 objectives.

IAEA SECURITY OBJECTIVES AND FUNDAMENTAL PRINCIPLES

Overview and Benefits

In September 2001, the IAEA Board of Governors considered and endorsed a set of Security Objectives and Fundamental Principles (Fundamental Principles) based on the **recommendations of a team of legal and technical experts** convened to consider possible amendments to the CPPNM. The Fundamental Principles were **drawn from the recommendations, concepts, and terminology of INFCIRC/225**.

Endorsement of the Fundamental Principles was meant as a step toward **strengthening the physical security regime** and **promoting the effective implementation and improvement of physical protection worldwide**. The purpose was to define and establish principles at the state

level. The Fundamental Principles were **later incorporated into the 2005 Amendment to the CPPNM**. The following is a summary of the Fundamental Principles:

- Primary **responsibility for the physical protection regime** rests entirely with the **state**.
- States' responsibilities for protection of nuclear material extend to **international transport**.
- States are responsible for establishing and maintaining a **legislative and regulatory framework to govern physical protection**, which should include a system of evaluation and licensing, a system of inspection to verify compliance, and means of enforcement.
- States should establish a **competent authority responsible for implementation of the legislative and regulatory framework** that is independent from the body charged with promoting nuclear energy.
- **Primary responsibility for implementation** of physical protection should rest with the **holders of licenses** or other authorizing documents.
- Organizations involved in implementing physical security should give **priority to security culture**.
- The state's physical protection should be **based on the state's current evaluation of the threat**.
- Physical protection requirements should be based on a **graded approach**.
- The state's requirements for physical protection should reflect **several layers and methods of protection**.
- The state should establish and implement a **quality assurance policy and programs** to provide confidence that requirements of physical protection activities are satisfied.
- **Contingency plans** to respond to unauthorized removal of nuclear material or sabotage of nuclear facilities should be prepared.
- The state should establish **requirements for protecting confidentiality** of information, the unauthorized disclosure of which could compromise physical protection.

Limitations

- The Fundamental Principles are **non-binding until the 2005 Amendment to the CPPNM enters into force**, and then will only be binding for parties to the amendment.
- There is **no mechanism to provide verification or assurances** to other countries that states' security practices reflect the Fundamental Principles through mandatory reporting or external review.
- **Variable implementation across states** may compromise achievement of the Fundamental Principles' objectives.

SAFEGUARDS AND NUCLEAR MATERIAL ACCOUNTING (INFCIRC/153)

Overview and Benefits

An essential first step in securing all nuclear material is to ensure that **all nuclear material is identified, characterized, quantified, and accounted for**. The IAEA has developed a **standard nuclear material accounting system** that it requires of all states with nuclear material subject to IAEA safeguards. The outline of the system is given in the standard safeguards agreement, **INFCIRC/153**. The system is further elaborated in the IAEA's **Nuclear Material Accounting Handbook**, Services Series 15, and a number of more specific technical guides. In combination, these requirements and guidelines form a **standardized accounting system**, with defined technical procedures and standards.

The Nuclear Nonproliferation Treaty (NPT) requires **non-nuclear-weapon states** (NNWS) to conclude **comprehensive safeguards agreements** (based on INFCIRC/153) with the IAEA and place under safeguards all nuclear materials in all peaceful nuclear activities in the state's territory, jurisdiction, or under its control. Safeguards allow the IAEA to verify the identification, characterization, quantification, and accounting for all nuclear materials within the state's purview for the purpose of verifying that **nuclear material is not diverted** from peaceful uses to use in nuclear weapons or devices. In case of non-compliance with IAEA safeguards, the **IAEA Board of Governors** may call upon the violator to remedy such non-compliance and must report the non-compliance to the UN Security Council and General Assembly. The Security Council may impose measures to enforce compliance.

As the **nuclear-weapon states** (the P5 countries) and **non-NPT states** (India, Pakistan, Israel, and North Korea) have nuclear material outside safeguards, comprehensive safeguards agreements are not applicable to them. The NWS have concluded **voluntary offer safeguards agreements** (based on INFCIRC/153) offering nuclear material and facilities from which the IAEA may select to apply safeguards (the United States and the United Kingdom have designated all civilian facilities). India, Pakistan, and Israel have concluded **item-specific safeguards agreements** (based on INFCIRC/66) offering specified material and facilities for safeguards. Voluntary offer agreements and item-specific agreements have similar material accounting requirements to comprehensive safeguards agreements.

While **the purpose of safeguards is not security**, the requirement for a **national system of accounting for and control** of all nuclear material subject to safeguards is **a basic foundation for nuclear security**. However, it is important to remember that although the IAEA, through its

safeguards system, has a crucial role in verifying that nuclear materials are not diverted from peaceful use to nuclear weapons, its **role in ensuring the security of nuclear materials is limited**, by both its mandate and its budget.

Safeguards are not—nor have they ever been—designed to provide physical security measures for the safeguarded facilities. IAEA safeguards inspections are designed for the specific purpose of detecting—after the fact—whether nuclear material is missing from a facility or has not been declared and whether the inspected state may have diverted the material to a weapons program. Such **inspections do not prevent material from being stolen**.

Limitations

- Because IAEA comprehensive safeguards are not, and in current circumstances cannot be, universal, there is **no universal system of accounting for nuclear materials**. Even if IAEA safeguards were applied to all civilian facilities and inventories, military materials would be excluded.
- While INFCIRC/153 requires a material accounting system, it **does not provide specific guidance** on implementation. The **Nuclear Material Accounting Handbook** and **technical guides** are **non-binding**. Therefore, **variable implementation across states** may compromise achievement of INFCIRC/153 objectives.
- IAEA safeguards agreements are designed to detect and deter the diversion of nuclear material from peaceful uses, **not to prevent acquisition of nuclear material by unauthorized persons**. Accounting and control measures for preventing theft of nuclear materials are somewhat different from the measures required for confirming non-diversion.

NUCLEAR SUPPLIERS GROUP (NSG)

Overview and Benefits

The Nuclear Suppliers Group (NSG) was established in 1975 to ensure that suppliers apply a **uniform approach to nuclear and nuclear-related exports and dual-use exports.** NSG members pursue the aims of the NSG through **voluntary adherence to NSG Guidelines** that are adopted by consensus, and through an **exchange of information**, notably on developments of nuclear proliferation concern. The NSG Guidelines have two parts, one for nuclear material, equipment, and technology (the “trigger list”) and one for dual-use items. The NSG Guidelines aim to ensure that nuclear trade for peaceful purposes **does not contribute to the proliferation** of

nuclear weapons or other nuclear explosive devices, while not hindering international trade and cooperation in the nuclear field.

The NSG is an **important adjunct to the NPT regime**, addressing a core dilemma posed by the NPT—that nuclear material and technology acquired for peaceful purposes can also be used in weapons. Key to the NSG Guidelines is **that suppliers should authorize transfers of trigger list items to a NNWS only where those items will be subject to IAEA safeguards, in most cases comprehensive safeguards**. The NSG Guidelines also state that **recipients should have physical security measures** in place to prevent theft and unauthorized use of their imports.

NSG membership is composed of 46 supplier states; the European Commission serves as a permanent observer.

Limitations

- Guidelines are **non-binding**, political commitments.
- Adherence to the NSG Guidelines is dependent on national laws and practices, leading to **inconsistent implementation**.

FISSILE MATERIAL CUTOFF TREATY (FMCT)

Overview and Benefits

For over two decades, attempts have been made to begin formal negotiations for development of a Fissile Material Cutoff Treaty (FMCT), which would end global production of fissile material for use in nuclear weapons. Ending production of fissile material for weapons is important to nuclear security because of the **relationship between quantities and risk**—the more material, the greater the risk that material could be stolen.

The principal body responsible for negotiations of the FMCT is the **Conference on Disarmament** (CD), which operates on the basis of consensus. Because the CD has been in **deadlock**, agreement for negotiations has not been possible.

Limitations

- The FMCT is only a concept, and there are **major obstacles**, including **strong opposition** from at least one key country to the conclusion of such an agreement.
- **Requirement for consensus** means one country or a small group of countries can stall negotiations.

- There is a **lack of political will** required to agree to end production of fissile material for nuclear weapons and **major hurdles to agreeing on a verification** system.

II. MULTILATERAL ENGAGEMENT MECHANISMS

NUCLEAR SECURITY SUMMITS

Overview and Benefits

Securing all nuclear materials worldwide requires first an **acknowledgment of the urgency of the threat** and **political will** on the part of key decision makers to act to reduce the threat. The Nuclear Security Summit process has been an **important step toward reaching a consensus and focusing high-level attention** on the threat. The Nuclear Security Summits bring together government leaders from countries around the world and representatives from key international bodies to agree on an **agenda for securing all vulnerable nuclear material**.

The first Summit, held in Washington, D.C., in April 2010, was attended by 47 countries and three international organizations and resulted in more than 60 national commitments to take specific actions. **Over 80 percent of the commitments made at the Summit had been fulfilled** as of March 2012. The second Summit, held in Seoul, Korea, in March 2012, was attended by 53 countries and resulted in **over 100 national commitments**. At the close of the 2012 Summit, participants produced a **communiqué** identifying areas of priority and **individual national statements of voluntary commitments** toward improving nuclear security. The 2012 Summit also added nuclear safety and the safety and security of radioactive materials to the agenda. The next Summit will be held in the Netherlands in 2014.

Limitations

- Commitments made at the Summits are **voluntary**, **non-binding, political commitments**.
- There is **no mechanism to provide verification or assurances** to other countries through mandatory reporting or external review that countries are meeting their commitments.
- As the communiqué is a **consensus-driven document**, this can lead to a lowest common denominator outcome.
- **Sustained high-level attention is needed** to ensure successful future Summits.

G8 GLOBAL PARTNERSHIP AGAINST THE SPREAD OF WEAPONS AND MATERIALS OF MASS DESTRUCTION

Overview and Benefits

While international agreements and other binding instruments are important pieces of the global nuclear security system, **informal mechanisms for country cooperation** on nuclear security enable countries to **match resources to specific projects**, resulting in **more effective implementation** of international agreements and commitments. The G8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (Global Partnership) has played an important role in bringing countries together for this purpose.

The Global Partnership, announced at the June 2002 G8 summit in Kananaskis, Canada, is a G8 initiative committed to **preventing terrorists, or those that harbor them, from acquiring or developing** nuclear, chemical, radiological, or biological weapons, missiles, or related materials, equipment, and technology. The G8 countries pledged $20 billion over ten years to **fund projects to secure and dismantle stockpiles of weapons of mass destruction**, initially in Russia. G8 leaders agreed on six principles for the initiative and on a set of guidelines for implementation. The principles focus on:

- **Universalizing multilateral treaties** and international instruments
- Measures to **secure and account** for weapons of mass destruction and weapons-related materials, equipment, and technology
- **Physical protection** measures
- Effective **border controls, law enforcement, and international cooperation** to detect, deter, and interdict illicit trafficking of such items
- **National export and trans-shipment controls**
- **Management and disposal of stockpiles** of fissile materials, elimination of chemical weapons, and minimization of holdings of biological materials.

A Senior Group coordinates Global Partnership activities, monitors progress, and identifies priorities.

Since its inception, the G8 has **successfully implemented numerous projects**, mainly in Russia and the former Soviet Union but also in other places. The number of Global Partnership donor countries also has expanded to include 15 non-G8 countries. At the G8 summit in Deauville, France, members agreed to **extend the Global Partnership for ten more years** and address **security of nuclear and radiological materials**, **biosecurity**, **engagement with weapons**

scientists in the field of nonproliferation, and **implementation of UNSCR 1540**. Members also agreed to expand the Global Partnership's membership.

Limitations

- Commitments are **non-binding**.
- There is **no mechanism to enforce commitments or provide verification or assurances** to other countries through mandatory reporting or external review.
- Operations are **based on voluntary contributions**.

GLOBAL INITIATIVE TO COMBAT NUCLEAR TERRORISM (GICNT)

Overview and Benefits

Another informal mechanism that has helped **countries establish nuclear security approaches** and **share information** on different elements of their nuclear security enterprise is the Global Initiative to Combat Nuclear Terrorism (GICNT). The mission of GICNT, established on July 15, 2006, by President George Bush and President Vladimir Putin in part as a complement to ICSANT, is to **strengthen global capacity to prevent, detect, and respond to nuclear terrorism** by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of partner nations. Countries become partners by endorsing a **Statement of Principles** encompassing the following deterrence, detection, prevention, and response objectives:

- Improve **accounting, control, and protection** of nuclear and radiological materials
- Enhance security at civilian **nuclear facilities**
- Develop **capabilities to detect and halt illicit trafficking** of such materials
- Improve **capabilities to search for, confiscate, and establish safe control** over nuclear or radiological materials
- Assure **denial of safe haven and resources** from terrorists seeking to acquire or use nuclear or radiological materials
- Put in place **laws to counter nuclear terrorism-related activity**
- **Share information** to prevent and respond to acts of nuclear terrorism
- Develop **capability to respond to and mitigate** acts of nuclear terrorism.

Partner nations conduct **multilateral activities, workshops, and table-top and field exercises**. Recently, partners have recognized the importance of cooperation between the private sector and governments. An **Implementation and Assessment Group** is charged with implementing

priorities and ensuring that **GICNT's activities are coordinated with and complementary to other international efforts**, in particular implementation of ICSANT, the CPPNM and its amendment, and UNSCR 1540. There are 85 partner nations and the IAEA is one of four official observers.

Limitations

- Membership is **voluntary** and **not universal**.
- There is **no mechanism to enforce commitments, monitor implementation, or provide verification or assurances** to other countries through mandatory reporting or external review.
- Focus areas are defined by consensus agreement leading to a **limited scope of large project areas**, although "one off" activities can be hosted by GICNT members acting independently.
- Operations are **based on voluntary contributions**.

PROLIFERATION SECURITY INITIATIVE (PSI)

Overview and Benefits

The Proliferation Security Initiative (PSI) is an **informal grouping of states** which have joined together to prevent trafficking by **detecting and intercepting** weapons of mass destruction (WMD), their means of delivery, and WMD-related materials.

The **PSI Statement of Interdiction Principles** commits participants to establish a more **coordinated and effective basis** through which to impede and stop these items. Countries commit to:

- **Interdict transfers** to and from states and non-state actors of proliferation concern to the extent of their capabilities and legal authority
- Develop procedures to facilitate the **exchange of information** with other countries
- **Strengthen national legal authorities** to facilitate interdiction
- Take specific actions in **support of interdiction** efforts.

Over 95 countries participate in the PSI.

A number of members have signed **bilateral Mutual Shipboarding Agreements** with the United States that allow both parties to the agreement **permission to board vessels** sailing under their national flags which are suspected of transporting proliferating material or technology. Many of

these countries are **flag-of-convenience states** allowing the PSI to **broaden its reach**. Several **high-profile successes** in interdicting or turning back WMD-related shipments have been attributed to PSI cooperation.

Limitations

- Participation is **voluntary**.
- Commitments are **non-binding**.
- The PSI **lacks an organizing structure**.
- A number of countries do not participate in PSI, such as India, Pakistan, and China, and cooperation is **not universal**.
- Boarding agreements **apply only to commercial transportation**, not government transportation.

III. IMPLEMENTATION SERVICES

IAEA NUCLEAR SECURITY ADVISORY SERVICES

Overview and Benefits

The IAEA's inspections mandate is limited to safeguards, not security. Recognizing that the IAEA has the **technical knowledge and experience to provide advice and assistance in the area of security**, the IAEA, funded through voluntary donations of member states to the Nuclear Security Fund, provides **advisory services.** Combined with IAEA recommendations, guidelines, and other materials, these **services provide a needed resource to help states strengthen** their nuclear security.

Upon a state's request, the IAEA may conduct **missions, evaluations, and provide technical services** to help the requesting state **assess its nuclear security needs** and **improve its capabilities** for securing its nuclear material. The IAEA offers the following services:

- **International Physical Protection Advisory Service** (IPPAS): IPPAS missions carry out detailed **reviews of a state's legal and regulatory basis for physical protection** of nuclear activities and **assess whether systems are consistent with the recommendations of INFCIRC/225**. IPPASS missions also compare the state's practices to IAEA guidance. Additionally, they are focused on specific facilities and are not state-

wide assessments. Following the review, the IAEA may conduct follow-up assistance, such as training and technical support.

- **International Nuclear Security Advisory Service** (INSServ): INSServ missions help **identify a state's nuclear security requirements** and measures needed to meet them.
- **SSAC Advisory Service** (ISSAS): ISSAS missions **provide recommendations and suggestions for a state's systems for accountancy and control of nuclear material**. The missions evaluate the regulatory, legislative, administrative, and technical components of the SSAC and assess how the SSAC meets the obligations contained in the state's safeguards agreement and, if applicable, additional protocol.
- **Integrated Regulatory Review Service** (IRRS): IRRS missions help states to improve the **effectiveness of national regulatory bodies** and to implement national safety legislation and regulations.
- **International Team of Experts Advisory Service** (ITEAS): ITEAS is a mechanism to reach out to states regarding **adherence to or implementation of international instruments** relevant to enhancing protection against nuclear terrorism.
- **Integrated Nuclear Security Support Plan** (INSSP): INSSP is a means to provide a holistic approach to **nuclear security capacity-building** based on findings and recommendations from its nuclear security missions in a way that is tailored to country-specific needs.

The IAEA's advisory services are offered in connection with the IAEA's **Nuclear Security Plan (2010-2013)**. The objective of the Nuclear Security Plan is to establish and achieve **global acceptance of an agreed international framework** for nuclear security and to support its application. It focuses on four areas: 1) needs assessment, information, collection, and analysis; 2) contributing to enhancement of a global nuclear security framework; 3) providing nuclear security services; and 4) risk reduction and security improvement. The plan envisions **supporting states, upon their request,** through assistance in capacity-building, guidance, human resource development, sustainability, and risk reduction.

Limitations

- The IAEA provides advisory services only **upon the request of a state**.
- Unless requested, review missions **do not assess the actual quality of physical protection** at facilities but rather whether systems are in place to support the security mission.
- Advisory service **outcomes are confidential**, with no public release of even broad conclusions. States are **not obligated to respond to conclusions** or **address identified deficiencies**.

- The IAEA's advisory services are only partly covered by the IAEA's regular budget and are instead **primarily supported through voluntary contributions** to the Nuclear Security Fund.

WORLD INSTITUTE FOR NUCLEAR SECURITY (WINS)

Overview and Benefits

The World Institute for Nuclear Security (WINS) is an organization whose purpose is to provide a forum for nuclear security professionals to share and promote best security practices. Best practice exchanges can be a valuable tool to enable rapid and dynamic improvements for facilities' security implementation. WINS produces **best practices guides**, including **self-assessment tools**, and is **developing accreditation and training** for professionals engaged in nuclear security activities from the guards to the senior executives with legal responsibilities for material protection. WINS is also **developing peer review offerings** for its members. WINS has over 1,000 members from over 62 countries. Participation in WINS is voluntary.

Limitations

- Best practices are **non-binding**.
- There is **no mechanism to monitor implementation of best practices or provide verification or assurances** to other countries through mandatory reporting or external review.
- WINS activities are **funded through donations**, which means its budget is contingent on (and activities limited by) these commitments.