

A Report on the Formulated Generic Set of Fundamentals based on Good Practices on the Implementation of the Additional Protocol

Member Countries - Forum for Nuclear Cooperation in Asia (FNCA)
Nuclear Security and Safeguards Project

INTRODUCTION

The ratification of the Protocol Additional (AP) to the safeguards agreement had involved some changes in the Asian countries' resource infrastructures. These changes are necessary to ensure adherence to the respective State's obligations and commitments under the Nuclear Non-Proliferation Treaty (NPT). The Member States of the Forum for Nuclear Cooperation in Asia (FNCA) under its Nuclear Security and Safeguards Project (NSSP), had undertaken a 3-year plan (2017-2019) with the task of formulating a generic set of fundamentals on the AP implementation. Since the nuclear fuel cycle characteristics of the Asian countries involved in the project are quite different in several aspects, these entail a diverse strategy in resource infrastructure development. Thus, formulating a generic set of fundamentals based on good practices would be beneficial not only among the project members but also to all countries which have ratified and those intending to ratify the AP.

This report describes good practices and the different approaches the country may implement toward achieving the same objectives. The generic set of fundamentals are based on the States' experiences and their respective good practices, including lessons learned, following the requirements stipulated in the articles of the AP. Two surveys were conducted. The first survey in the last quarter of 2017, involved a template requesting information on a general context. However, the second survey in the second quarter of 2019, was focused on export/import. The participating countries were requested to provide the information and to describe what has been implemented or still in the process to meet the requirements of the AP.

The members of the NSSP include Bangladesh, China, Indonesia, Japan, Kazakhstan, Malaysia, Mongolia, the Philippines, the Republic of Korea, Thailand and Viet Nam. It was decided and agreed, among the members, that each country will randomly be assigned a letter from A to J to keep the confidentiality of the information.

The formulated generic set of fundamentals, relevant and important in achieving the requirements and the safeguards (SG) technical objectives of the International Atomic

Energy Agency (IAEA) with the AP implementation are as follows:

1. Provision of Information

The scope of the information required under the safeguards agreement with an AP is intended to provide the IAEA with a complete picture and a better understanding of the nuclear activities in a State. The information will lead to the State's increased transparency allowing the IAEA to confirm with a high degree of confidence the absence of undeclared nuclear material and activities. The good practices on the provision of information are further categorized according to the following:

- a. Collection of Declaration
- b. Preparation of Declaration
- c. Reporting and Submission of Declaration

2. Complementary Access (CA)

The AP provides the IAEA with expanded rights of access to information and sites, including any other location where nuclear material is or may be present. Complementary access provides the IAEA the assurance of the absence of undeclared nuclear material and nuclear-related activities, or to resolve any questions or inconsistencies in the State's declarations. The good practices on the CA implementation are further categorized according to the following:

- a. Handling of Advance Notification
- b. Conduct of CA
- c. Documentation of CA

3. Designation of Agency (IAEA) Inspectors

The acceptance by the Member States of the simplified procedures for designations of inspectors under the AP contributes to strengthening the effective and efficient implementation of the safeguards system. This also includes the issuance of a multiple entry visa valid for a least one year.

4. Annexes

The State's provision of information on the manufacture and export of sensitive nuclear-related technologies allows the IAEA a verification mechanism for the manufacturing and import locations in a State. The AP annexes are:

Annex I: List of Activities referred to in Article 2.1.(iv) of the AP

Annex II: List of Specified Equipment and Non-Nuclear Material for the reporting of exports and imports according to Article 2.a.(ix) of the AP

5. Supporting SG Infrastructures

The States, in meeting their safeguards obligations, can establish different processes and procedures at the national level in organizing the necessary safeguards infrastructures. In particular, the SG agreement emphasizes the establishment of the State System of Accounting for and Control of Nuclear Material (SSAC). The SG infrastructures would depend on the size and complexity of their respective nuclear programmes and regulatory frameworks. These infrastructures should consider the following:

- a. Established laws and regulations should meet the requirements of the AP,
- b. Provision of timely, accurate and complete declarations, and other information to the IAEA, and
- c. Provision of support and timely access to locations and information necessary for the IAEA to carry out its verification activities.

The following sections of this report provide a summary of good practices, including lessons learned, shared by the participating member countries which have responded to the survey conducted during the period 2017-2019. This report has also considered what the countries have shared during the annual workshops.

COUNTRY A

A1. Provision of Information

The State Regulatory Authority (SRA) prepares the AP declarations with the use of the IAEA AP Protocol Reporter Software. The SRA has developed and implemented a procedure for receiving, processing and submitting AP declarations to the IAEA. The SRA performs safeguards inspections to verify the AP information received from stakeholders prior to its submission to the IAEA. It uses the IAEA State Declaration Portal (SDP) in submitting its AP declarations. The SRA's Virtual Private Network (VPN) device has been upgraded for secured communication between the SRA and the IAEA.

A2. Complementary Access

Country A is maintaining a secure channel of communication between the SRA and the IAEA in sending advance notifications. It is keeping a direct communication line between the SRA and the IAEA thus facilitating IAEA access. The SRA has developed and implemented procedures to receive IAEA inspectors.

A3. Designation of Agency (IAEA) Inspectors

The SRA is developing and implementing the procedure for the approval of designated IAEA inspectors. It is cooperating with its Ministry of Foreign Affairs (MOFA) to support the issuance of visas to designated IAEA inspectors. It is keeping a

regularly updated list of designated IAEA inspectors with support from MOFA, the responsible Ministry.

A4. Annexes

Export/Import control measures are regulated under the Atomic Energy Law. Following the country's Atomic Energy Law, the Agency for Radiation and Nuclear Safety is responsible for the issuance of license/permit to nuclear fuel cycle-related nuclear material and activities. It requires the Customs clearance/approval for export/import. The SRA is developing and implementing a procedure with guidelines for specified equipment and non-nuclear material exports and imports.

The SRA has conducted an outreach activity, with support from international partners, on matters related to Annexes I and II for the industrial stakeholders.

A5. Supporting SG Infrastructures

Country A is in the process of amending its Atomic Energy Law to promote the independence of its SRA. It is developing working procedures in support of the IAEA safeguards activities. It is sending new SRA staff for training at regional and international SSAC courses. It has conducted a workshop on performing national SG inspections with support from international partners. The SRA provides training to the facilities on safeguards implementation.

The SRA has established and installed a safeguards information management system to handle accounting reports, AP declarations and other safeguards related information (in consultation with international partners). This system is also being used by facility operators. It is providing training, in cooperation with the IAEA, for the SRA and licensees, on the use of the Protocol Reporter for AP declarations.

COUNTRY B

B1. Provision of Information

The SRA collects information from the licensees (facilities and LOFs), as part of its regulatory activities, in-person during inspection or over-the-phone during review and assessment or when needed. However, for non-licensee stakeholders (e.g., Department of Foreign Trade, Customs Department, Research and Academic Institutes not using nuclear material), information is collected through collaboration and Memorandum of Understanding (MoU), and through official letters/announcements. Meetings/Workshops/Training/Seminars are conducted for all stakeholders. The SRA makes use also of topical questionnaires to collect information. The SRA maintains close contact with domestic stakeholders.

The SRA prepares its AP declarations with the use of the IAEA AP Protocol Reporter Software. It is performing a consistency check of all reported information against the SG agreement. It is transmitting digital maps to the IAEA under Article

2.a.(iii) using geodatabase format. It is sending timely quarterly declarations under Article 2.a.(ix) even when there is “nothing to declare”.

B2. Complementary Access

The SRA is setting up a procedure for CA. It is sharing the IAEA’s Advance Notification with the Facility and Location Outside Facility (LOF) officers.

B3. Designation of Agency (IAEA) Inspectors

Country B is keeping a regularly updated list of designated IAEA inspectors.

B4. Annexes

Export/Import control measures of dual-use items (DUI) are regulated under the Trade Control on Weapons of Mass Destruction Related Items Act 2019 (TCWMD). The Department of Foreign Trade, under the Ministry of Commerce, is the designated authority for the issuance of license/permit. The AP Annex II items are regulated as dual-use items in Country B. The SRA is cooperating with the Ministry of Commerce for Article 2.a.(ix) and Annex II declarations. The SRA is cooperating with the Customs to regulate exports of items under Annex II. The SRA is obtaining information on the Annex I activities by enforcing the Ministerial Regulation.

B5. Supporting SG Infrastructures

The SRA is utilizing communication tools: conventional method, secure communication channel and the SDP. The SRA finds consulting with the IAEA, through the designated IAEA country officer, useful for effective and efficient safeguards implementation.

The SRA is developing and maintaining regulations and procedures to support AP activities. It is also developing and maintaining mandatory training and re-training for SRA and Operators. It is providing working-level training on specific AP implementation reporting issues. It is sending new SRA staff for training at regional and international SSAC courses. It is securing adequate office space, information technology (IT) capabilities, access to meeting rooms and support staff in building and strengthening its safeguards infrastructures. It is collaborating with international partners to strengthen its capacity building.

COUNTRY C

C1. Provision of Information

The SRA has established a database of possible stakeholders to facilitate communication. Having an efficient system for collecting information was necessary to make it easier for AP implementation.

The SRA is preparing AP declarations using the IAEA guidelines and format as published in the IAEA Services Series 11. It is using the AP Protocol Reporter Software. It is holding outreach seminars for universities and mining industries for SG-exempted

nuclear materials, that are reportable under Article 2.a.(vii). It is distributing Annex II brochures to relevant stakeholders which are helpful for reporting exports and imports under Article 2.a.(ix). It is establishing a timeline, under Article 3, for the effective and efficient submission of reports to the IAEA.

C2. Complementary Access

When hosting CA, the SRA is developing procedures with operators to avoid delaying access for IAEA inspectors. The SRA recognizes the availability of updated and accurate facility layouts and site maps is vital in the conduct of CA.

C3. Designation of Agency (IAEA) Inspectors

The SRA is keeping an updated list/database of designated IAEA inspectors. In addition, the SRA is maintaining communication with facility owners/operators, and keeping updated contact numbers of stakeholders for CA notices.

C4. Annexes

All import/export of strategic goods is required to apply for permits from the Registration Authorization Division of the Strategic Trade Management Office. Import/export permits from the Bureau of Customs through E2M (Electronic to Mobile) system and the National Single Window System links other regulatory body issuances of the licensees for the relevant import/export.

C5. Supporting SG Infrastructures

The SRA is developing its knowledge management system. It is maintaining a roster of qualified safeguards staff. To strengthen its current organization, the SRA is requesting an ISSAS mission to assess gaps and shortcomings and as well to recognize good practices of SG implementation.

The SRA has conducted an outreach program with colleges and universities that have established Research & Development (R&D) activities, as well as the mining industries involved with the leaching process. For updates, constant communication is maintained with the stakeholders. Country C is providing regular training on Commodity Identification for Stakeholders and the SRA, coupled with the provision of the relevant brochures.

COUNTRY D

D1. Provision of Information

The SRA is disseminating AP information to relevant government authorities. The relevant government authorities are directly providing information to the SRA. All reported information is checked. Declarations related to exports and imports of equipment and non-nuclear material are sent timely on a quarterly basis, even when there is “nothing to declare”.

The SRA is using the US DOE NNSA’s “AP Declaration Helper” as a tool to

clarify AP reporting requirements. The SRA prepares its AP declarations with the use of the IAEA AP Protocol Reporter Software and is using the IAEA SDP to submit.

D2. Complementary Access

The experience of Country D from its first CA provided a meaningful input for the SRA's continuous improvement of its national safeguards system.

D3. Designation of Agency (IAEA) Inspectors

Country D is keeping an updated list/database of designated IAEA inspectors.

D4. Annexes

For nuclear material and radiation generators, under the Law on Nuclear Energy, the State Administrative Authority for Geology and Mining Issues is responsible for the issuance of license/permit. However, for export/import activities, under the General Agency for Specialized Inspections, the State Administrative Authority for professional inspection issue is responsible for issuance of license/permit. Country D is providing workshops on Nuclear Material Accounting and Control (NMAC), for Annexes I and II, to all relevant authorities.

D5. Supporting SG Infrastructures

Country D is formulating accountancy and control rules and regulations for the establishment of the SSAC. It is holding jointly organized training courses on nuclear safety and nuclear safeguards. It is sending new SRA and inspection staff for training at regional and international SSAC courses and NMAC. The SRA has drafted guidance on quality management system including managing and controlling safeguards documents, the use of the condition report system, and the principles of continuous process improvement.

COUNTRY E

E2. Complementary Access

In the case of a force majeure, Country E has opted on the use of all available communication to alert the IAEA of the situation impeding CA. The SRA has informed the IAEA of the forecast on severe cold-weather conditions and the probable imposition of a travel restriction to the site.

Photos taken by IAEA inspectors during the verification activities are considered by representatives of stakeholders as containing "sensitive" (commercial) information. Therefore, these photos should remain onsite. The IAEA, together with Country E, has developed a procedure to address photos taken during CA. It was decided to keep the collected information obtained during CA (e.g., photographs) at the location (facilities/sites, mines) under IAEA seals for future reference.

E3. Designation of Agency (IAEA) Inspectors

Country E is keeping a regularly updated list of designated IAEA inspectors at the

checkpoints of controlled facilities/sites.

E4. Annexes

Country E is a member of the Zangger Committee (ZAC) and the Nuclear Suppliers Group (NSG). Export/Import control measures are implemented under the Order of the Minister of Investment and Development. The issuance of license/permit is with the Decision of the Customs Union Commission. After document control, the act of joint inspection is implemented by Custom Officers, which is a joint inspection of vehicle and goods, to confirm passage of control at the checkpoint.

E5. Supporting SG Infrastructures

Country E is introducing online remote video monitoring systems at critical facilities under safeguards. Recognizing the importance of timely and clarity of communications, the SRA has been judiciously providing the IAEA with information on the State and National holidays.

COUNTRY F

F4. Annexes

For export/import control measures in Country F, all applicants must apply for the permit online, either under the Atomic Energy Licensing Act or the Strategic Trade Act. If the permit is approved by the SRA or the permit-issuing agency, the approved permits are sent to the Customs for validation and cross-reference against Customs declarations. There are different requirements depending on the means of transport:

- By air, the applicant must comply with the law and procedure under the Civil Aviation Authority;
- By land, for radioactive material, nuclear material, prescribed substance or irradiating apparatus must comply with the Atomic Energy Licensing Act, Radiation Protection (Transport) Regulations and other relevant act;
- By sea, must comply with the relevant act controlled by the relevant agency.

F5. Supporting SG Infrastructures

Country F is providing support to IAEA SG activities by hosting regional workshops on CA.

COUNTRY G

G1. Provision of Information

The SRA is dedicating staff responsible for collecting and maintaining the AP declarations.

G2. Complementary Access

The SRA is sharing advance notifications with all site representatives.

G3. Designation of Agency (IAEA) Inspectors

Country G is sharing the list of designated IAEA inspectors between the SRA and Operators.

G4. Annexes

For all types of import/export, Customs documentation check is the first controlling measure under the Customs Act and the Prescribed Bill of Entry and the Bill of Export Form Order. In the case of import/export of nuclear, radioactive content, radiation equipment, and nuclear reactor and its parts, import/export permit and NOC (No Objection Certificate) issued by the Atomic Energy Regulatory Authority, the designated SRA, is required under the Import Policy Order and the Export Policy.

G5. Supporting SG Infrastructures

Country G has incorporated the issue of IAEA safeguards into one of the sections of its Atomic Energy Regulatory Act. The SRA is working to develop a number of regulations, rules, and guidance that have to be incorporated into the National Import/Export Policy for the full-fledged implementation of the Act.

COUNTRY H

H1. Provision of Information

The SRA is requiring the facility to submit the annual update one month before the time specified under the AP. It is preparing AP declarations using the Protocol Reporter Software. It is creating a list of person-in-charge from each nuclear installation to facilitate coordination and declaration process.

H2. Complementary Access

The SRA is creating a list of point-of-contact, available at any time, for advance notification. It is developing procedures for accepting CA.

H3. Designation of Agency (IAEA) Inspectors

The SRA is coordinating with MOFA for the inspector's designation and visa processing. It is keeping a regularly updated list of designated IAEA inspectors.

H4. Annexes

The SRA controls the import/export of nuclear materials, radioactive sources and X-ray generators. The licensing and approval are managed through the SRA's online system which is integrated with the Customs' system (Country H National Single Window).

The SRA is coordinating with nuclear installation experts to identify Annex II equipment specifications.

H5. Supporting SG Infrastructures

The SRA is engaging staff to participate in SG training and is conducting Focus

Group Discussion on SG and AP. It is cooperating with stakeholders (Universities, MOFA, private companies) on AP related issues. It has created awareness by incorporating, in a dedicated database, news and information related to nuclear arms control.

COUNTRY I

11. Provision of Information

The Government has granted the SRA to request any concerned individual to submit a report relevant to AP declarations.

12. Complementary Access

The Government has provided the legal authority to allow the entry of IAEA inspectors to any location, other than facilities, to perform CA in the presence of designated government official(s).

14. Annexes

Country I is a member of the Zangger Committee, the Nuclear Suppliers Group, and the Wassenaar Arrangement. Annex I activities are defined in the domestic law which is necessary for the preparation of Article 2.a.(iv) declarations. Export/Import control measures are stipulated in the Foreign Exchange and Foreign Trade Act and relevant legislation under the jurisdiction of the Ministry of Economy, Trade, and Industry.

15. Supporting SG Infrastructures

Country I has amended the Domestic Law/Regulation to provide legal authority to the SRA to collect AP relevant information and to conduct CA. Meetings, including continuing dialogue, are held with Operators for the effective development of procedures on AP declarations and for fostering common understanding.

COUNTRY J

11. Provision of Information

Country J submits to the IAEA a comprehensive report on its nuclear cooperation. Upon request by the IAEA, information is offered regarding research and development activities on nuclear fuel recycle conducted in the country through international cooperation.

12. Complementary Access

Country J permits and protects free communications for official reasons between the IAEA inspectors and the IAEA Headquarters and/or regional offices, and the attended and unattended transmission of information obtained in the facilities under safeguards.

J3. Designation of Agency (IAEA) Inspectors

Country J provides support to the designation of IAEA safeguards inspectors, visa application, inspection communications, message transmission, and other safeguards-related activities.

J4. Annexes

Country J is a member of the Zangger Committee and the Nuclear Suppliers Group. It provides reports to the IAEA on the export and import of uranium and thorium under Article 2.a.(vi)(b)(1).

SUMMARY

Every country, as described in this report, may have varied approaches to the AP implementation in meeting their respective safeguards obligations. Although the Asian countries involved in the project have different nuclear fuel cycle characteristics, this report also shows that there are some common good practices being implemented in addressing the AP requirements. The FNCA objective of formulating a generic set of fundamentals on AP implementation was achieved through a collection/compilation and the analysis of good practices and shared experiences from its project members. The experiences and good practices shared by each member country become a learning reference and a motivation for further improvement.

The result of the NSSP task highlights the country's capacity-building development efforts in providing assurance on the correctness and completeness of the State's declarations and reports to the IAEA. In addition, this report emphasizes and confirms the country's unwavering effort and support to fulfill its commitments under the nuclear non-proliferation regime.