



IAEA

International Atomic Energy Agency
Atoms for Peace and Development

Overview of IPPAS

IPPAS Preparatory Meeting

21 – 22 September, 2023, Tokyo, Japan

**Division of Nuclear Security
Department of Nuclear Safety and Security**

Outline

- IPPAS Evolution and Process
- Objectives
- IPPAS Outputs, Benefits & Follow-up Activities
- Statistics of IPPAS Missions
- Recent IPPAS Activities and New Developments
- Conclusion

IPPAS EVOLUTION AND PROCESS

The Starting Point

- 1995 - Board of Governors requested Secretariat to provide an **advisory service** to assist Member States, **upon request**, with an appraisal of their national systems for physical protection
- First IPPAS mission was conducted in **1996**
- IPPAS mission is **not an inspection**
- **INFCIRC/225/ Rev.3** was used as basis for recommendations

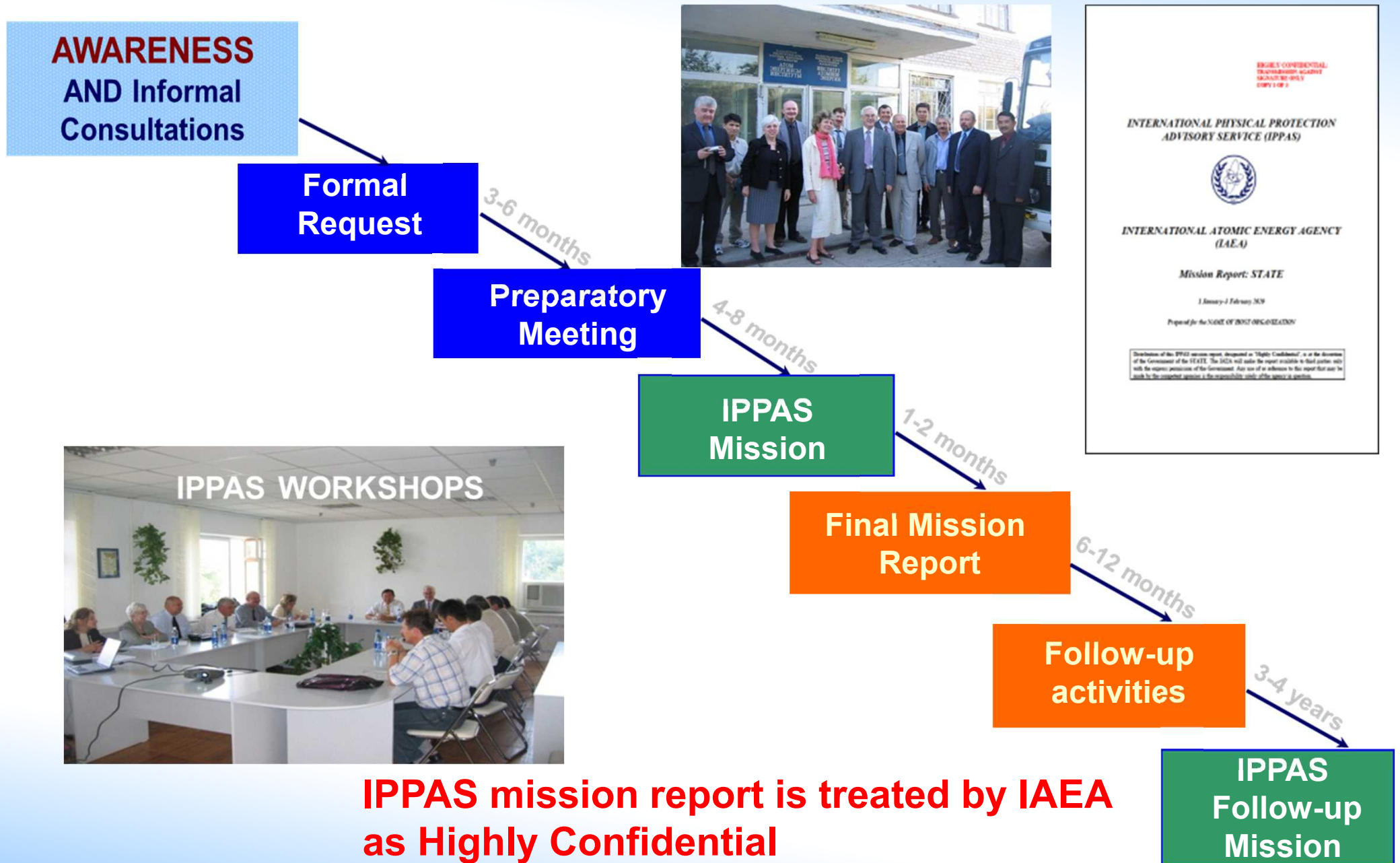


Evolution of IPPAS

- 1998 - Consultants Meeting conducted to discuss IPPAS experience
- 1999 - First IPPAS Guidelines published
 - Revised in November 2012
 - Extended Guidelines published in 2014
- 2012 - Development of training material and conduct of pilot IPPAS workshop
- 2014 – Development and delivery of IPPAS International Training Courses for potential IPPAS Team Members
- IPPAS activities include national workshop, preparatory meeting, the mission, and follow-up assistance



IPPAS Process



IPPAS mission report is treated by IAEA as Highly Confidential

IPPAS Preparatory Meeting



Preparatory meeting in the host country (4-8 months before the mission starts):

- scope and objectives, main features of IPPAS
- documentation needed during the mission
- preparation of the advance information package
- logistic support
- preparation, review and confidentiality of the IPPAS report and technical notes
- identification and scheduling of all persons and organizations to be interviewed
- team formation
- financial arrangements

Modular Approach

- Module 1: National review of nuclear security regime for nuclear material and nuclear facilities
- Module 2: Nuclear facility review
- Module 3: Transport review for nuclear material
- Module 4: Security of radioactive material and associated facilities and activities
- Module 5: Computer Security Review

In-draft:

- Module 6: Nuclear Material Accounting and Control

IPPAS Team Formation



- Team Leader
- Four or more experts
 - As agreed to during the preparatory meeting
 - From various countries (mainly from national authorities)
 - From various areas of expertise, knowledge and national approaches
- IAEA Technical Officer

Content of Advance Information Package



- According to IPPAS Guidelines:
 - Description of the national security regime
 - Relevant laws, regulations related to nuclear security and etc.
 - Information on facilities to be visited
 - Activities to be observed
 - Planning and programme of the IPPAS mission
 - List of documents relevant to nuclear security, and
 - Basic description of the country and the logistic aspects

Importance of Advance Information Package



- Advance information package is important
 - for the host country and
 - the IPPAS team
- It will create a first impression, a first step
- More detailed information is given during the mission
 - Briefings, interviews and observations
 - Additional documents

Typical Agenda of IPPAS Mission



- **DAY 1 – Sunday:** Arrival of IPPAS team to the Host country, accommodation and Team orientation meeting.
- **DAY 2 – Monday:** Opening meeting, presentations and interviews with the Competent Authority and other relevant authorities of the Host country on the legal and regulatory framework.
- **DAY 3 – Tuesday:** Continuation of discussions on State's physical protection regime.
- **DAY 4 – Wednesday:** Travel to the Nuclear facility and facility visit.
- **DAY 5 – Thursday:** Continuation of facility visit.
- **DAY 6 – Friday:** Travel back to the hotel where IPPAS team stays during the mission. Team work on the mission report.
- **DAY 7 – Saturday:** Drafting of the mission report.
- **DAY 8 – Sunday –** Half day social event and free time

Typical Agenda of IPPAS Mission (cont.)



- **DAY 9 – Monday:** Drafting of the mission report and if required, additional clarifications will be provided by the Competent Authority.
- **DAY 10 – Tuesday:** Drafting of the mission report
- **DAY 11 – Wednesday:** Drafting of the report and provision of the initial draft for comments to the Competent Authority (usually by noon).
- **DAY 12 – Thursday:** Finalization of the draft mission report, based on the feedback from the Competent Authority, and preparation for the exit meeting. Final feedback from the Competent Authority.
- **DAY 13 – Friday:** Team leader's briefing, delivery of the draft mission report, closing remarks of IAEA and host organization's officials.
- **DAY 14 – Saturday:** – Departure of the IPPAS team.

Objectives

Objectives of the IPPAS Mission



- Review/compare **State's Nuclear Security Regime** and **Security Systems** for nuclear and other radioactive material & associated facilities **against international legal instruments and IAEA Nuclear Security Series (NSS)**
- Assist **Member States and Operators** on **how to translate obligations and** recommendations from international instruments and IAEA NSS publications into **specific requirements** and how to implement these requirements
- **Identify good practices** that could be communicated to other Member States for long-term improvement
- **Identify areas** where the IAEA could improve its services or develop new ones

Objectives of IPPAS Mission (cont.)



- Provide:
 - advice to operators and shippers and/or carriers on their physical protection systems and various methods by which international recommendations and good practices can be satisfied
 - key staff of the national competent authorities, operators and shippers and/or carriers with an opportunity to discuss their practices with the team of international experts who have experience in the field

IPPAS OUTPUTS, BENEFITS AND FOLLOW-UP ACTIVITIES

IPPAS Mission: Output/Benefits

- IPPAS report provides:
 - **Independent** views and recommendations by **international** team of experts
 - **Advice**, which establishes solid basis for further enhancement of the national nuclear security regime
- Exchange of international **experience**
- Broadening **knowledge**
- **International** recognition and sharing of **good practices**



- A recommendation is an **advice on improvements that should be made** in the areas that have been evaluated and discussed with the host country.
- Such advice must be based on CPPNM and its 2005 Amendment, security provisions of the Code of Conduct on the Safety and Security of Radioactive Sources, IAEA Nuclear Security Fundamentals or Nuclear Security Recommendations.
- **Recommendations are specific, realistic and designed to result in tangible improvements.**

Recommendations (examples)

For the regulatory authority:

- CA should increase the staff resources to perform its assigned roles and responsibilities for physical protection.
- CA should develop and implement a complete set of regulations and guidance for Physical Protection.

For the nuclear operator:

- NPP should develop and implement a facility physical protection plan. This plan should be based on the State's DBT.
- NPP should review its nuclear facility PPS design and implementation and evaluate its effectiveness.

IPPAS Mission Findings - Suggestion



- A suggestion may either be an **additional proposal** in conjunction with a recommendation or **stand on its own** following a discussion of the associated topic with the host country.
- It **contributes to improvements** in the State nuclear security regime by indicating useful expansions of existing programmes and pointing to better alternatives to current work practices. In general, it should stimulate the competent authority, other relevant entities and the facility or transport operator's management and staff to consider ways and means of enhancing nuclear security.
- Suggestions are based on international good practices and/or IAEA nuclear security implementing guides and technical guidance.

Suggestions (examples)

For the regulatory authority:

- CA should consider requiring operators to establish and maintain a schedule of planned modifications to physical protection as part of the approved security plan in order to provide clarity of the scope and planned completion date of such modifications.
- CA should consider reinforcing its inspection policy by introducing unannounced inspections and increasing the frequency of inspections devoted to physical protection.

IPPAS Mission Findings – Good Practice



A good practice is an **indication of an outstanding organizational arrangement, programme, performance or activity**

- that is **more than just the fulfilment** of current international obligations and IAEA recommendations.
- It should be worthy of bringing to the attention of other Member States as a model in the general drive for excellence.

Examples:

- A comprehensive programme is established by the State for defining and maintaining Design Basis Threat. The programme also defines clear roles and responsibilities of all involved organizations.
- Facility top management is competent and actively engaged in security activities; nuclear security is always on the agenda of top management meetings.

IPPAS Follow-up Activities

Assistance provided, upon request by the host country, on the basis of the recommendations and suggestions of the IPPAS mission

- Necessary additional advice
- Legislative and regulatory assistance
- Training for regulators and operators
- DBT methodology
- Methodology on self-assessment of nuclear security culture
- Equipment for upgrades
- ... other areas for cooperation



Benefits of IPPAS Follow-up Activities

- Enhanced legal and regulatory framework for physical protection of nuclear and other radioactive material
- Enhanced human resources development and capacity building
- DBT defined and used for design and effectiveness evaluation of Physical Protection Systems
- Technical means of PPS upgraded
- Nuclear Security Culture enhanced



STATISTICS OF IPPAS MISSIONS

IPPAS Missions in Numbers (1)

100 missions conducted since 1996

22 follow-up missions

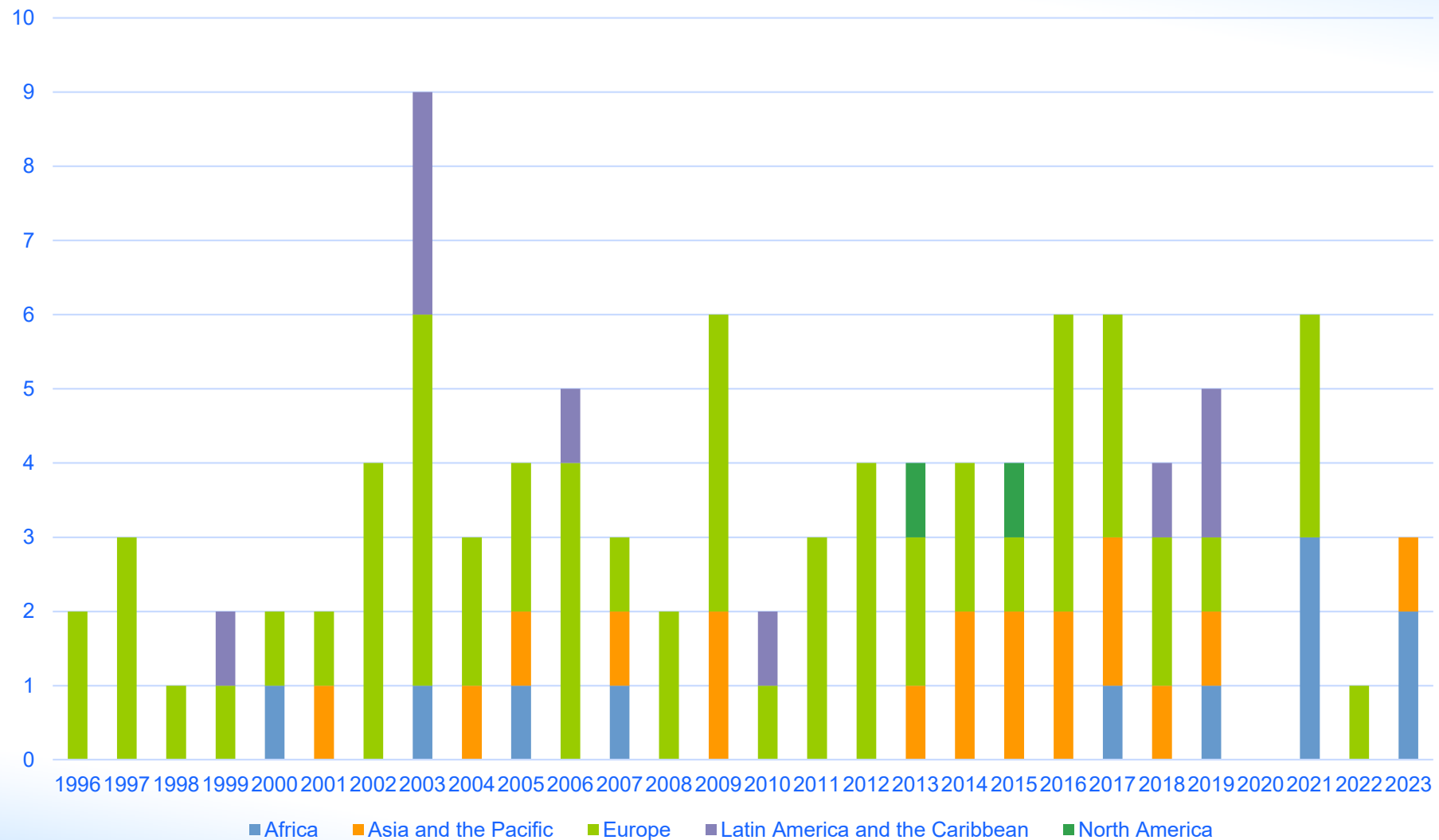
60 States and the IAEA Laboratories received IPPAS mission

More than 240 experts from more than 40 countries participated in IPPAS missions



IPPAS Missions in Numbers (2)

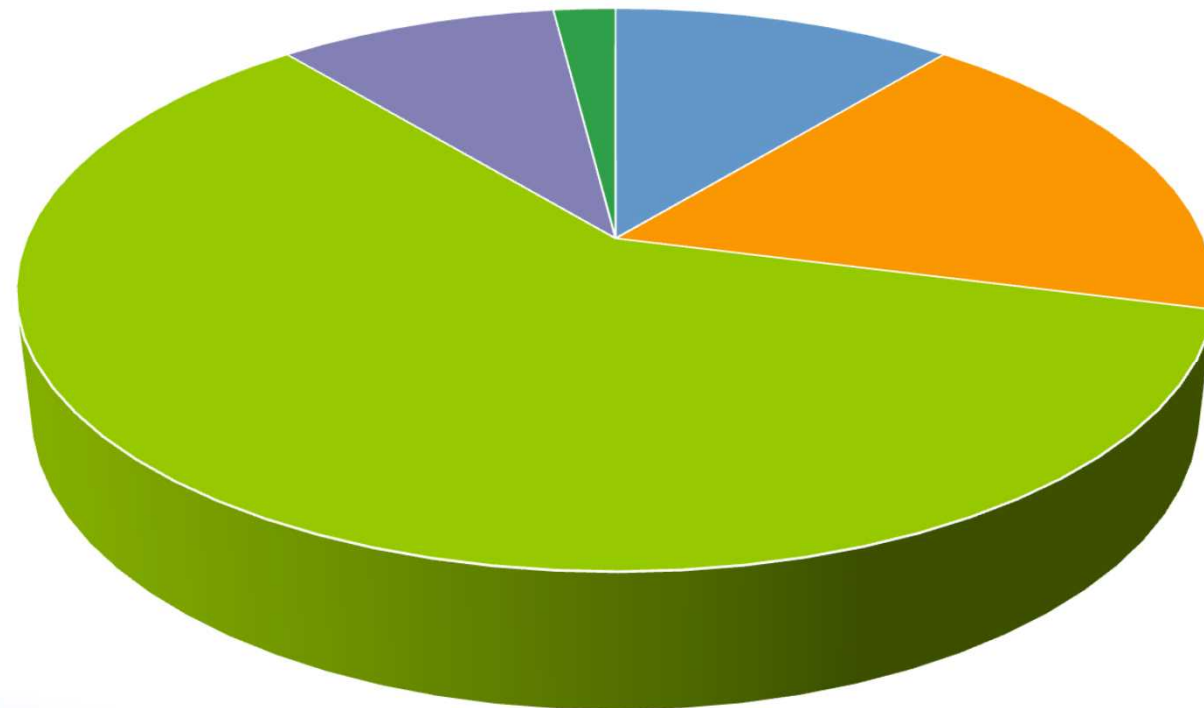
Number of IPPAS missions per year and regions



IPPAS Missions in Numbers (3)

Africa	11
Asia and the Pacific	18
Europe	60
Latin America and the Caribbean	9
North America	2

IPPAS missions in regions



■ Africa ■ Asia and the Pacific ■ Europe ■ Latin America and the Caribbean ■ North America

IPPAS Missions in Numbers (4)

1	Bulgaria	1996	35	Mexico	2006	70	UK	2016
2	Slovenia	1996	36	Kazakhstan	2006	71	Poland	2016
3	Romania	1997	37	Uzbekistan	2006	72	Malaysia	2016
4	Hungary	1997	38	Ghana	2007	73	Albania	2016
5	Poland	1997	39	Indonesia	2007	74	Sweden	2016
6	Czech Republic	1998	40	Ukraine	2007	75	UAE	2016
7	Lithuania	1999	41	Netherlands	2008	76	Hungary	2017
8	Peru	1999	42	Georgia	2008	77	China	2017
9	Belarus	2000	43	Finland	2009	78	Germany	2017
10	DR Congo	2000	44	Netherlands	2009	79	Lithuania	2017
11	Indonesia	2001	45	Belarus	2009	80	Australia	2017
12	Ukraine	2001	46	Turkmenistan	2009	81	DR Congo	2017
13	Czech Republic	2002	47	Bangladesh	2009	82	Ecuador	2018
14	Romania	2002	48	Singapore	2009	83	France	2018
15	Lithuania	2002	49	Slovenia	2010	84	Switzerland	2018
16	Bulgaria	2002	50	Cuba	2010	85	Japan	2018
17	Ukraine	2003	51	Sweden	2011	86	Lebanon	2019
18	Ukraine	2003	52	UK	2011	87	Belgium	2019
19	Turkey	2003	53	France	2011	88	Madagascar	2019
20	Norway	2003	54	Netherlands	2012	89	Uruguay	2019
21	Philippines	2003	55	Finland	2012	90	Paraguay	2019
22	Armenia	2003	56	Kazakhstan	2012	91	Niger	2021
23	Mexico	2003	57	Romania	2012	92	Belarus	2021
24	Chile	2003	58	IAEA laboratories at Seibersdorf	2013	93	Burkina Faso	2021
25	Peru	2003	59	Hungary	2013	94	Turkey	2021
26	Iran	2004	60	USA	2013	95	Czech Republic	2021
27	Ukraine	2004	61	Australia	2013	96	Senegal	2021
28	Kazakhstan	2004	62	Republic of Korea	2014	97	Finland	2022
29	Thailand	2005	63	Indonesia	2014	98	Kuwait	2023
30	Switzerland	2005	64	Belgium	2014	99	Nigeria	2023
31	Egypt	2005	65	Armenia	2014	100	Zambia	2023
32	Netherlands	2005	66	Japan	2015			
33	Serbia and Montenegro	2006	67	Norway	2015			
34	Slovakia	2006	68	Canada	2015			
			69	New Zealand	2015			

RECENT IPPAS ACTIVITIES AND NEW DEVELOPMENTS

Recent Important IPPAS Activities



- Establishment and Update of the database of IPPAS Good Practices
- Increasing the pool of Subject Matter Experts (SMEs)
- Delivery of IPPAS International Training Courses/Workshops for potential team members (15-19 December 2014, 14-18 December 2015, 23-27 October 2017, 9-13 September 2019 and 22-26 May 2023)
- Following the inaugural International Seminar on IPPAS (4-5 December 2013 in Paris, France), delivery of the second occurred 22-23 November 2016 in London, UK and third conducted 8-9 December 2021 at VIC, Vienna, Austria
- Missions conducted in 2021 included Niger, Belarus, Burkina Faso, Czech Republic, Senegal and Turkey
- 2022 Finland
- 2023 Kuwait, Nigeria and Zambia
- Missions are planned to be conducted in Netherlands, Switzerland (follow-up) and in Congo in 2023
- 2024 Bangladesh, Japan, Romania and USA

Database of IPPAS Good Practices



- Recommendation to establish the database provided by participants of the First International Seminar on IPPAS, held on 4-5 December 2013 in Paris, France
- All Member States that hosted an IPPAS mission before May 2015 have agreed to share their good practices in the database
- Development of Database of IPPAS Good Practices completed in the beginning of 2016
- Database was updated Q2/2021 (532 good practices in the database)
- Note Verbales had been sent out on 27 July 2021 inviting IAEA Member States to nominate POC(s) for the updated Database
- 113 POCs from 61 Member States

The Future Ahead



- Development and use of **e-learning tools** and conduct of IPPAS workshops for host country and for potential new team members of IPPAS
- Maintaining and updating of the **database on IPPAS Good Practices**
- **Expansion of the pool** of international experts available for conduct of IPPAS missions
- Systematic **analysis of, and follow up to,** the recommendations, suggestions provided and good practices identified during IPPAS missions
- Publication of **IPPAS Self-assessment Guidelines**
- Development of **new IPPAS modules** and **update of the IPPAS Guidelines**

Conclusions



- IPPAS is widely recognized as a service providing in-depth evaluation of State's nuclear security regime and helping to improve it
- IPPAS provides basis for development of a comprehensive programme to enhance nuclear security at the State and facility levels
- Essential in addressing sustainability and in promoting of nuclear security culture
- IPPAS facilitates an implementation of the IAEA Nuclear Security Series guidance and through that adherence to the CPPNM 2005 Amendment
- It is an important tool to build confidence within the international community and the general public with regard to the effectiveness of national nuclear security regimes
- An essential feature of IPPAS is the availability, upon request, of IAEA follow-up assistance, such as training, technical support and more targeted assessments of various elements of national nuclear security regime



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Thank you!

