

International Atomic Energy Agency

International Physical Protection Advisory Service (IPPAS)

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Office of Nuclear Security Department of Nuclear Safety and Security

OUTLINE

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INTRODUCTION



CONTEXT

THE POSSIBILITY THAT NUCLEAR OR OTHER RADIOACTIVE MATERIAL COULD BE USED FOR MALICIOUS PURPOSES IS REAL.

A global threat demands a global response.





The Vision



ACHIEVING WORLDWIDE, EFFECTIVE SECURITY WHEREVER NUCLEAR OR OTHER RADIOACTIVE MATERIAL IS IN USE, STORAGE AND/OR TRANSPORT, AND OF ASSOCIATED FACILITIES



UNDERSTANDING THE THREAT AND RISK





Who poses the biggest risk?

- -The States that does not recognize the threat of nuclear terrorism
- -The State that does not take preventive action
- -The State that is complacent

What is the threat?

criminals or terrorists acquiring and using for malicious purposes:

-Nuclear weapons -Nuclear material to make IND -Radioactive material for RDD or RED -Sabotage of nuclear installations or transport





THE NUCLEAR AND RADIOLOGICAL THREAT

• THEFT OF NUCLEAR WEAPON

• THEFT OF NUCLEAR MATERIAL (IMPROVISED NUCLEAR EXPLOSIVE DEVICE, IND)





THE NUCLEAR AND RADIOLOGICAL THREAT

THEFT OF RADIOACTIVE MATERIAL FOR RDD OR RED





THE NUCLEAR AND RADIOLOGICAL THREAT

SABOTAGE OF FACILITY OR TRANSPORT (Physical, Cyber)





Potential Targets in Figures

- > 25.000 nuclear weapons> 3.000 tons civil and military HEU and Pu
- > 480 research reactors (> 100 with HEU)> 100 fuel cycle facilities
- > 430 operating nuclear power plants
- > 100.000 Cat I and II radioactive sources
 > 1.000.000 Cat III radioactive sources







Nuclear Security







Prevention

Detection

Response

... to theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material, other radioactive substances or their associated facilities.

THE RESPONSIBILITY FOR THE ESTABLISHMENT, IMPLEMENTATION AND MAINTENANCE OF A NUCLEAR SECURITY REGIME WITHIN A STATE RESTS ENTIRELY WITH THAT STATE



IPPAS HISTORY AND PROCESS



History of International Physical Protection Advisory Service (IPPAS)

- Board of Governors in 1995 requested secretariat to provide advisory service to assist States with an appraisal of their national systems for physical protection upon request of that State
- First IPPAS mission was conducted in **1996**
- Revised and updated 1998, review in April 2000
- Up to now, 55 IPPAS missions conducted







IPPAS OBJECTIVES



REVIEW STATE PHYSICAL **PROTECTION REGIME AND TO COMPARE** WITH INTERNATIONAL **LEGAL INSTRUMENTS AND GUIDANCE**



IPPAS OBJECTIVES



ASSIST MEMBER STATES AND NUCLEAR OPERATORS TO IMPLEMENT REQUIREMENTS OF INTERNATIONAL INSTRUMENTS AND RECOMMENDATIONS OF INFCIRC/225: THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL AND NUCLEAR FACILITIES



IPPAS OBJECTIVES

IDENTIFY GOOD PRACTICES THAT COULD BE COMMUNICATED TO OTHER MEMBER STATES FOR LONG-TERM IMPROVEMENT





INSTITUTIONAL ORGANIZATION, ASSIGNMENT OF RESPONSIBILITIES AND INTERNATIONAL OBLIGATIONS AND COOPERATION







INTEGRATION AND PARTICIPATION OF OTHER ORGANIZATIONS (LAW ENFORCEMENT AGENCIES, INTELLIGENCE AGENCIES, ...)









PRIMARY AND SECONDARY LEGISLATION (INCLUDING CRIMINAL LAW/CODE, REGULATIONS/DECREES/ORDERS ETC)







ROLES AND RESPONSIBILITIES OF THE COMPETENT AUTHORITY LICENSING/AUTHORISATION PROCESS







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THREAT ASSESSMENT AND DESIGN BASIS THREAT





SECURITY MANAGEMENT AND PLANNING





SECURITY ASSESSMENT CAPABILITIES





PROTECTION SYSTEMS (BY DESIGN, IN OPERATION....)







SECURITY PROCEDURES, SECURITY CULTURE





Basis for Recommendations and Suggestions

- The Convention on the Physical Protection of Nuclear Material and its 2005 Amendment
- Nuclear Security Recommendations
 - NSS No.13 (INFCIRC/225/Rev.5)
 - NSS No.14
- Other relevant IAEA Nuclear Security Series Documents





IPPAS Process



IPPAS mission report is Highly Confidential



IPPAS MISSION

DURATION OF THE MISSION FROM 6 DAYS TO 2 WEEKS.

TEAM COMPOSITION

TEAM LEADER AND FOUR OR MORE EXPERTS, MULTINATIONAL, MULTIDISCIPLINARY, IAEA TECHNICAL OFFICER, TECHNICAL WRITER MAY BE INCLUDED



FINAL IPPAS MISSION REPORT

- Draft report amended accordingly
- FINAL REPORT PRODUCED BY IAEA
- In accordance with the IAEA policy and procedures, IPPAS mission report is treated as "HIGHLY CONFIDENTIAL" information
- Distribution of the report is at the discretion of IAEA



INTERNATIONAL PHYSICAL PROTECTION ADVISORY SERVICE (IPPAS)



INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Mission Report: STATE

1 January-3 February 2020

Prepared for the NAME OF HOST ORGANIZATION

Distribution of this IPPAS mission report, designated as 'Highly Confidential', is at the discretion of the Government of the STATE. The IAEA will make the report available to third parties only with the express permission of the Government. Any use of or reference to this report that may be made by the competent agencies is the responsibility solely of the agency in question.



BENEFITS OF IPPAS MISSIONS AND FOLLOW-UP ACTIVITIES



IPPAS MISSION: Output/Benefits

- IPPAS report providing:
 - Independent views and recommendations of international team of experts
 - Advice, which establishes solid basis for further enhancement the national physical protection regime
- Exchange of international experience
- Broadening knowledge
- International recognition of good practices







IPPAS Follow-up Activities

Based on the recommendations

- Necessary additional advice
- Legislative and regulatory assistance
- Training for regulators and operators
- DBT methodology
- Equipment for upgrades
- Bilateral cooperation

Requested by Host country







Benefits of IPPAS Follow-up Activities

- Enhanced legal and regulatory framework for physical protection of nuclear and other radioactive material
- Capacity enhanced for human resources development
- 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



Statistics of IPPAS Missions

- 55 missions conducted since 1996
- 14 follow-up missions
- 37 countries received mission
- More than 100 experts from 29 countries participated in IPPAS missions
- In average, 25 recommendations, 8 sugesstions provided and 3 good practices identified during the mission
- Latest missions were conducted to: Sweden, the UK, France, the Netherlands (follow-up) and Finland (follow-up)









STATISTICS OF IPPAS MISSIONS (3)

- •1996 2 missions: Bulgaria, Slovenia
- •1997 3 missions: Hungary, Poland, Romania
- •1998 1 mission: Czech Republic
- •1999 2 missions: Lithuania, Peru
- •2000 2 missions: Belarus, Democratic Republic of Congo
- •2001 2 missions: Indonesia, Ukraine
- •2002 4 missions: Bulgaria (follow-up), Czech Republic (follow-up + Temelin), Lithuania (follow-up), Romania (follow-up)
- •2003 9 missions: Ukraine (follow-up +Chernobyl NPP), Ukraine (KNPP), Turkey, Norway, Armenia, Philippines, Chile, Mexico, Peru (follow-up)
- •2004 3 missions: Iran, Ukraine (Chernobyl Shelter), Kazakhstan
- •2005 4 missions: Thailand, Switzerland, Netherlands, Egypt
- 2006 5 missions: Kazakhstan (follow-up), Mexico (follow-up), Slovak Republic, Serbia and Montenegro, Uzbekistan
- •2007 3 missions: Ghana, Ukraine (follow-up), Indonesia (follow-up)
- •2008 2 missions: Netherlands (Facilities mission), Georgia
- •2009 6 missions: Finland, Netherlands, Belarus (follow-up), Turkmenistan, Bangladesh, Singapore
- •2010 2 missions: Slovenia (follow-up), Cuba
- •2011 3 missions: Sweden; UK, France,
- •2012 Netherlands (follow-up), Finland (follow-up)



Statistics of IPPAS Missions(2)



IPPAS Missions by year





CURRENT IPPAS ACTIVITIES



Current IPPAS Activities

- Finalization of the development of IPPAS guidance (implementing modular approach)
- Conduct of IPPAS missions on request of member states (requests received from Romania and Kazakhstan (LEU Bank) for 2012 and from Australia, Hungary, Korea and USA for 2013)
- Preparation and conduct of IPPAS mission to the IAEA SGAS facilities at Seibersdorf
- Arrangements for Technical meeting to discuss IPPAS experience and further improvement of this service (19-23 November 2012 in Vienna)
- Conduct of the Regional Workshop on IPPAS in Australia (5-7 November 2012)
- Preparation for the International Seminar on IPPAS to be conducted in France in 2013
- Provision of follow-up assistance to MSs





Conclusions

- IPPAS is fundamental in providing in-depth evaluation of state's physical protection regime
- Basis for development of comprehensive support programme to member states in upgrading nuclear security at the State and facility levels
- Essential in addressing sustainability and in promoting of nuclear security culture
- 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

WE LOOK FORWARD TO IPPAS BECOMING 'DE FACTO' THE NORM



Nuclear Security Conference

- 1-5 July 2013 in Vienna
- A global forum for policymakers, senior officials, managers and experts from all areas of nuclear security to...
 - Review experience and achievements to date
 - Enhance understanding of current approaches and identify trends
 - Discuss technical developments and issues
 - Formulate views on the future directions and priorities for nuclear security
 - Provide input to the IAEA's Nuclear Security Plan for 2014-2017

International Conference on Nuclear Security: ENHANCING GLOBAL EFFORTS









...Thank you for your attention



International Atomic Energy Agency