

INTERNATIONAL COOPERATION FOR THE SAFE AND SECURE INTRODUCTION AND EXPANSION OF NUCLEAR NERGY

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IAEA

International Atomic Energy Agency

AGENDA

- **GENERAL CONTEXT**
- **IAEA MISSIONS**
- **NEW AND EXPANDING NUCLEAR PROGRAMMES**
- **FUTURE EVENTS RELATED TO TSOs**
- **CONCLUSIONS**

GENERAL CONTEXT

Global Trends, Issues and Challenges

- **High level of safety performance worldwide**
- **New nuclear power programmes**
- **Rapid expansion of existing nuclear programmes**
- **Multinational and global nature of nuclear business and activities**
- **Important initiatives towards harmonization and standardization**

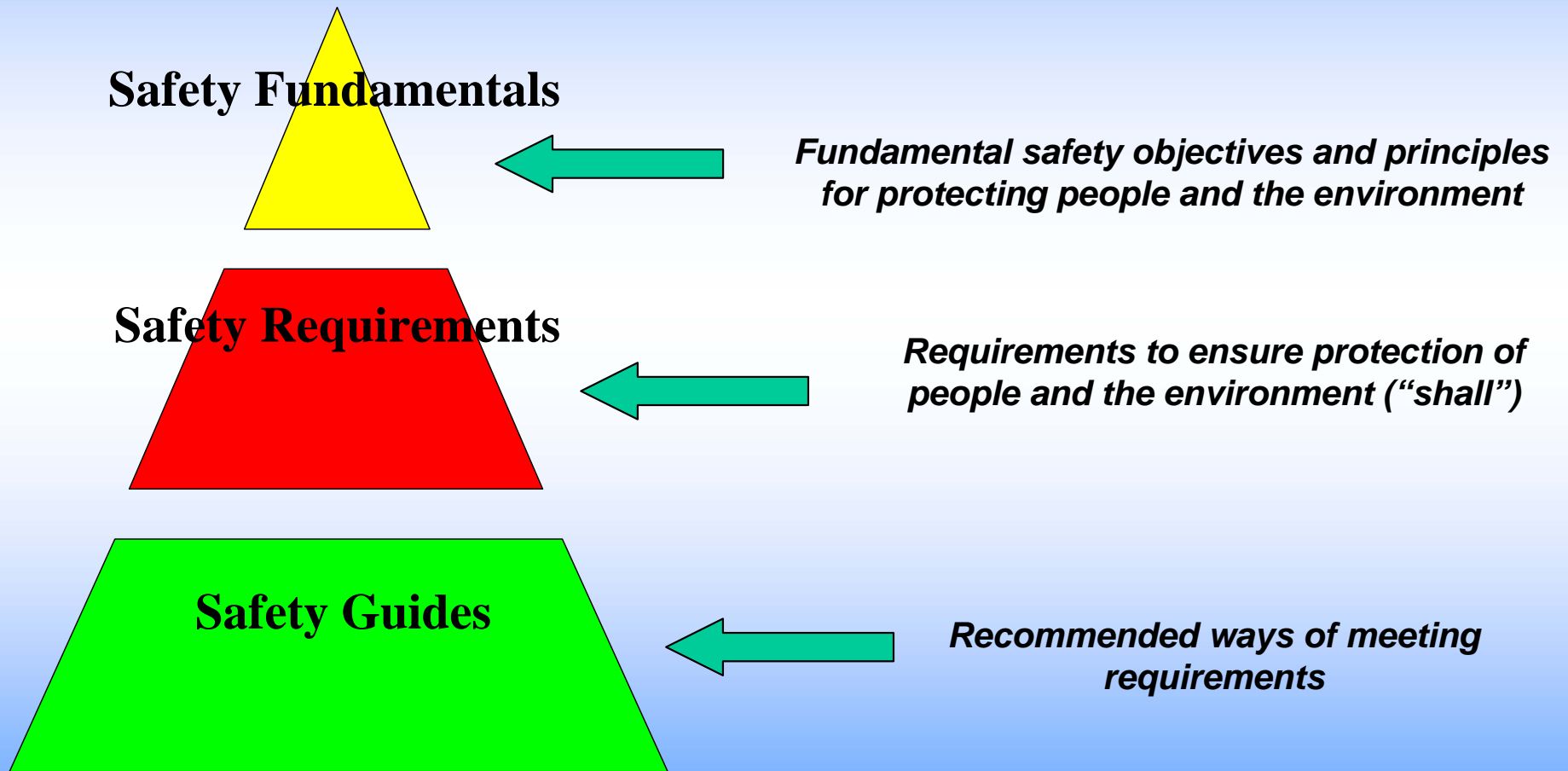
IAEA MISSIONS

IAEA Key Functions in Nuclear Safety

- **Facilitate and promote international cooperation**
- **Develop and support the use of safety standards and security guidelines**
- **Provide peer review and advisory services, at the request of Member States**
- **Support international conventions and legal instruments (e.g., codes of conduct)**

IAEA MISSIONS

IAEA Safety Standards (1)



IAEA MISSIONS

Harmonization

- **IAEA safety standards and security guidelines reflect international consensus at a general level**
 - **Depository of current state of international harmonisation**
 - **Often taken as starting point for further progress (WENRA, MDEP)**

- **IAEA reviews and services support the application of Agency standards and guidelines**
 - **Contribute to harmonization at general level**

IAEA MISSIONS

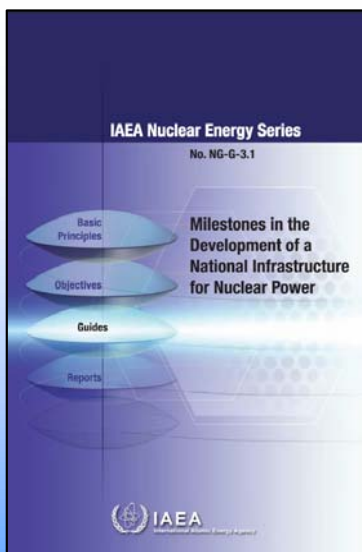
Interaction between IAEA and other organizations

- **IAEA safety standards must be complemented by detailed approaches for practical implementation (regulatory approach, design assessment ,...)**
- **IAEA and other key players (TSOs) activities are complementary, with significant potential for collaborations**

NEW AND EXPANDING NUCLEAR PROGRAMMES

Global Infrastructure Development

- General guidance for a phased approach
- IAEA “Milestones” document
- 19 key infrastructure issues, all of which affect safety to some extent



Considerations before decision to launch

Prep work for construction

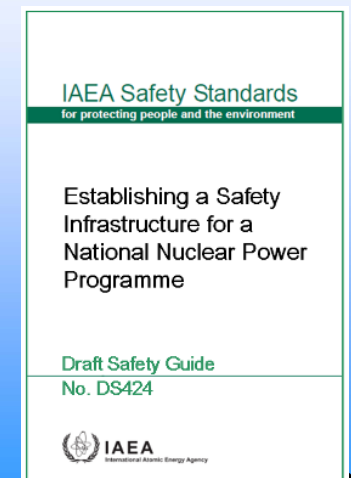
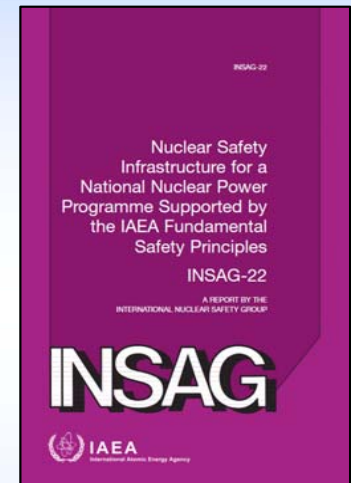
Activities to implement NPP



NEW AND EXPANDING NUCLEAR PROGRAMMES

Safety Infrastructure Development (1)

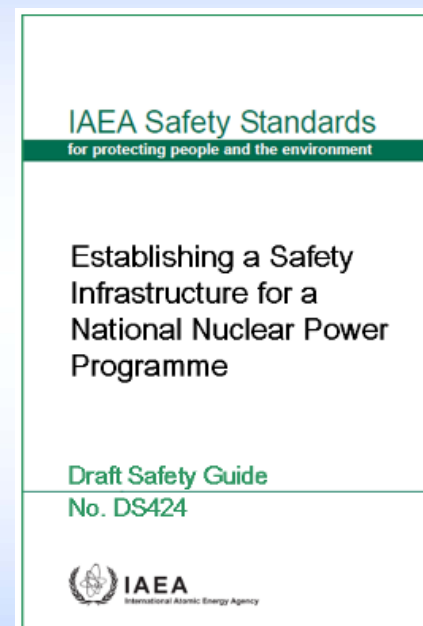
- **Objective: Full application of IAEA safety standard when newcomer starts operating its first nuclear power plant**
- **Safety infrastructure guidance provided by:**
 - **INSAG-22: “Nuclear Safety Infrastructure for a National Nuclear Power Programme Supported by the IAEA Fundamental Safety Principles”**
 - **DS424: “Establishing a Safety Infrastructure for a National Nuclear Power Programme”**



NEW AND EXPANDING NUCLEAR PROGRAMMES

Safety Infrastructure Development (2)

- **Roadmap for the progressive application of IAEA safety standards throughout the different phases of development**
- **Includes specific actions related to external support organizations**
- **TSOs make a significant contribution to the development of national safety infrastructures**



NEW AND EXPANDING NUCLEAR PROGRAMMES

Capacity building (1)

- IAEA education & training programmes as well as reviews & services based on Agency safety standards help build capacity on a general level**
- International capacity building mechanisms should include synergies with TSOs, regulators and other relevant organizations to provide more details for practical implementation**

NEW AND EXPANDING NUCLEAR PROGRAMMES

Capacity building (2)

- **Global, regional and thematic knowledge networks have been formed in recent years**
 - **ETSON, Asian Nuclear Safety Network (ANSN), Ibero American FORO, WWER Forum, Forum of Nuclear Regulatory Bodies in Africa (FNRBA),**
 - **Global Nuclear Safety and Security Network (GNSSN) developed by IAEA to provide linkages to existing networks**
- **Efficient structures to create and share knowledge for mutual learning**
- **Key capacity building tools**

FUTURE EVENTS RELATED TO TSOs

- **International Conference on the Challenges Faced by Technical and Scientific Support Organizations in Enhancing Nuclear Safety**
 - **2006 first conference – Aix en Provence, France**
 - **October 2010 follow up conference – Tokyo, Japan**
- **Draft safety guide on External Expert Support on Safety Issues**
 - **Outcome of the 2006 conference in Aix en Provence**
 - **Under development**
 - **Status report at 2010 conference in Tokyo**

CONCLUSIONS

- **While high levels of safety performance has been demonstrated worldwide, the rising interest in new and expanding nuclear power programmes requires vigilance and continuous effort**
- **IAEA standards, guidelines, reviews and services are playing an increasingly important role in infrastructure development**
- **TSOs should be key contributors in safety infrastructure development, capacity building and harmonization efforts**
- **Continued international cooperation is needed to ensure the safe and secure introduction and expansion of nuclear power**