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# Completion of the IAEA Action Plan on Nuclear Safety and release of the report on the Fukushima Daiichi accident

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# IAEA Action Plan on Nuclear Safety - Key facts

The purpose of the Action Plan was to define a programme of work to strengthen the global nuclear safety framework

The Action Plan covered **12 key areas** of nuclear safety with a view to integrating the lessons learned from the Fukushima Daiichi Accident



**Safety Assessments**



**IAEA Peer Reviews**



**Emergency Preparedness and Response**



**National Regulatory Bodies**



**Operating Organizations**



**IAEA Safety Standards**



**International Legal Framework**



**Member States Embarking on Nuclear Power**



**Capacity Building**



**Protection from Ionizing Radiation**



**Communication**



**Research & Development**

# IAEA Action Plan on Nuclear Safety - Key facts

## Results of the Action Plan



The Action Plan was unanimously adopted in September 2011



Since then the IAEA and its Member States have worked together to strengthen nuclear safety worldwide



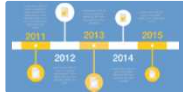
Over 1000 activities were carried out



About 40 Mio € implemented since Sept. 2011

# International Expert Missions

## 15 Missions to Japan



To review the Decommissioning Roadmap for the Fukushima Daiichi Units 1 to 4



Removal of spent fuel from storage pools



Management of contaminated water and waste



To support the marine monitoring programme off the coast of Fukushima



To review remediation of large contaminated areas off-site the Fukushima Daiichi NPP



Radiation monitoring in Fukushima Prefecture



Mission to Onagawa NPP to Examine Performance of SSCs



Review of NISA's Approach to the "Comprehensive Assessments for Safety of Existing Power Reactor Facilities"

# IAEA Peer Review Services

## 60% increase of peer review missions after the accident

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The IAEA peer reviews:

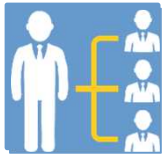
- conduct independent assessment of the safety of an activity or facility
- and aim to provide advice to Member States based on the relevant safety standards
- And to promote sharing information.

As a result of the Action Plan the IAEA peer review services:

- have been strengthened
- and Member States have been encouraged to host regular peer reviews of their nuclear facilities.

# International Experts Meetings

- **1588** participants in
- **9** international experts meetings from
- **87** Member States and
- **22** international organizations



Brought together leading experts from areas such as: Research, industry, regulatory control, safety assessment, emergency preparedness and response, etc.



To share the lessons learned from the accident and identify relevant best practices



And to ensure that both are widely disseminated

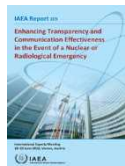


# Reports capturing lessons learned

Published in 2012



Reactor and Spent Fuel Safety in the light of the Accident



Enhancing Transparency and Communication Effectiveness



Protection Against Extreme Earthquakes and Tsunamis

Published in 2013



Decommissioning and Remediation after a Nuclear Accident



Strengthening Nuclear Regulatory Effectiveness



Preparedness and Response for a Nuclear or Radiological Emergency

Published in 2014



Human and Organizational Factors in Nuclear Safety



Radiation Protection: Promoting Confidence and Understanding

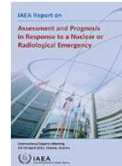
Published in 2015



Severe Accident Management



Strengthening Research and Development Effectiveness



Assessment and Prognosis in Response to a Nuclear or Radiological Emergency



Capacity Building for Nuclear Safety

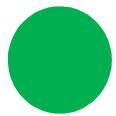
# The IAEA Report on the Fukushima Daiichi Accident



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Assessment of **causes and consequences** of the accident at Fukushima Daiichi NPP



Report by the Director General



Technical Volume 1  
Description and Context of the Accident



Technical Volume 2  
Safety Assessment



Technical Volume 3  
Emergency Preparedness and Response



Technical Volume 4  
Radiological Consequences



Technical Volume 5  
Post-accident Recovery







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<b>Section 1: Introduction</b>	The Report on the Fukushima Daiichi Accident					
<b>Section 2: The accident and its assessment</b>	Description of the accident	Nuclear safety considerations	<b>Technical Volumes 1 &amp; 2</b>			
<b>Section 3: Emergency preparedness and response</b>	Initial response in Japan to the accident	Protecting emergency workers	Protecting the public	Transition from the emergency phase to the recovery phase and analyses of the response	Response within the international framework for emergency preparedness and response	<b>Technical Volume 3</b>
<b>Section 4: Radiological consequences</b>	Radioactivity in the environment	Protecting people against radiation exposure	Radiation exposure	Health effects	Radiological consequences for non-human biota	<b>Technical Volume 4</b>
<b>Section 5: Post-accident recovery</b>	Off-site remediation of areas affected by the accident	On-site stabilization and preparations for de-commissioning	Management of contaminated material and radioactive waste	Community revitalization and stakeholder engagement		<b>Technical Volume 5</b>
<b>Section 6: The IAEA response to the accident</b>	IAEA activities	Meetings of the Contracting Parties to the Convention on Nuclear Safety	<b>Technical Volumes 1 &amp; 3</b>			

# The IAEA Report on the Fukushima Daiichi Accident

Approximately **180 experts from over 40 Member States** and various international bodies (including IAEA staff) were involved in the preparation of the report.



# Main outputs

## Observations and lessons highlighted by report on The Fukushima Daiichi Accident

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- **104** in the Technical Volumes
- **45** key observations and lessons in the Report by the Director General

## Lessons and recommendations rising from the activities of the Action Plan on Nuclear Safety

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- **350+** observations and recommendations
- **40+** source documents
- ...AND STILL COUNTING.

# REMARKS ON THE ACTION Plan and the Fukushima Report

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- While considerable progress has been made in the implementation of the Action Plan, work to maintain and strengthen nuclear safety requires ongoing attention. Concept of **nuclear safety as a process**.
- The Agency continues to implement the dedicated remaining projects related to the Action Plan within its regular programme.
- Relevant GC(59)/Resolution on Agency's nuclear safety strategy and programme of work

# Resolution GC(59)/RES/9

## September 2015

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“Requests the Agency to continue to build upon:

- Action Plan on Nuclear Safety and experience of States in implementing the Action Plan,
- Observations and lessons from the IAEA Fukushima Report,
- Principles of the Vienna Declaration,

and use them for defining its nuclear safety strategy and its programme of work.”



# IAEA Ongoing efforts to respond to Resolution GC(59)/RES/9 (2015)

- Methodology for **comprehensive** and **systematic** analysis of all observations and lessons from Fukushima accident to identify **priority** safety aspects.
- All kind of nuclear facilities and activities to be considered.
- In addition to the Fukushima, other lessons learned from other relevant sources such as the peer review missions, technical meetings and conferences will also be considered.

# Final remarks

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- The IAEA Fukushima report and the outputs from the Action Plan, provide a solid knowledge base for the future to continue strengthening nuclear safety;
- It is essential to ensure that regulators continue to be strong, independent and adequately resourced;
- The IAEA safety standards embody an international consensus on what constitutes a high level of safety;
- IAEA peer reviews have a key in further strengthening global nuclear safety;
- The IAEA will build on the Action Plan, the IAEA Fukushima report and other sources such as international instruments or peer reviews to define its nuclear safety strategy and programme of work;
- It is expected that Governments and Regulators in all countries will act on these lessons to continue to further strengthen nuclear safety. The Agency is ready to support Member States in this regard.



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*Thank you!*

