Communicating Fukushima
the IAEA experience

Crisis Communication: Facing the challenges
Madrid, Spain 9-10 May 2012

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Safety History: from Chernobyl to Fukushima

- Acceleration in development of safety standards, guidelines and services to assist countries affected
- Adoption of the Notification and Assistance Conventions (1986), and of the Convention on Nuclear Safety in 1994
- Department of Nuclear Safety was created a decade later
- 25 years later: Fukushima

"…Radioactivity does not respect national boundaries, or national sovereignties. Rules ensuring the safe use of large-scale nuclear activities should therefore be worked out internationally and accepted to apply everywhere…."

Hans Blix,
former IAEA Director General

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Security History: 9/11

September 11, 2001 aftermath of terrorist attack:

- Security risks from outside groups or insider threats became of paramount concern surrounding nuclear power plant critical infrastructure
- Questionable whether reactors would withstand such attacks
- 2003 Office of Security
- Amendment of the CPPNM launched in 1998, adopted in 2005, in Force: 20??
- Lessons from Fukushima?

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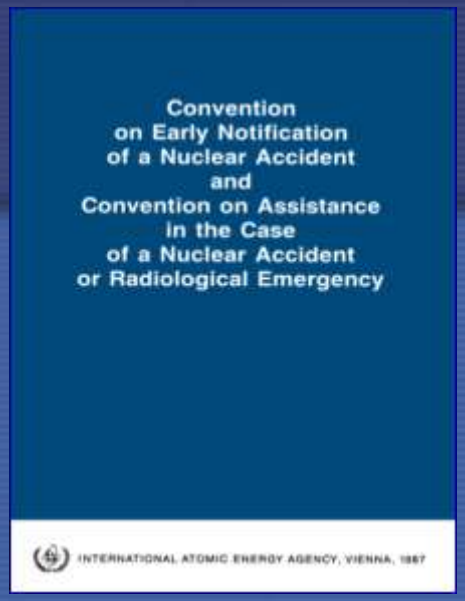
Convention on Early Notification of a Nuclear Accident



- Strengthens the international response for nuclear accidents by providing a mechanism for rapid information exchange in order to minimize radiological consequences

- Applies in the event of any accident involving specified facilities or activities of a State Party from which a release of radioactive material occurs or is likely to occur and which has resulted or may result in an international transboundary release that could be of radiological safety significance to another State.

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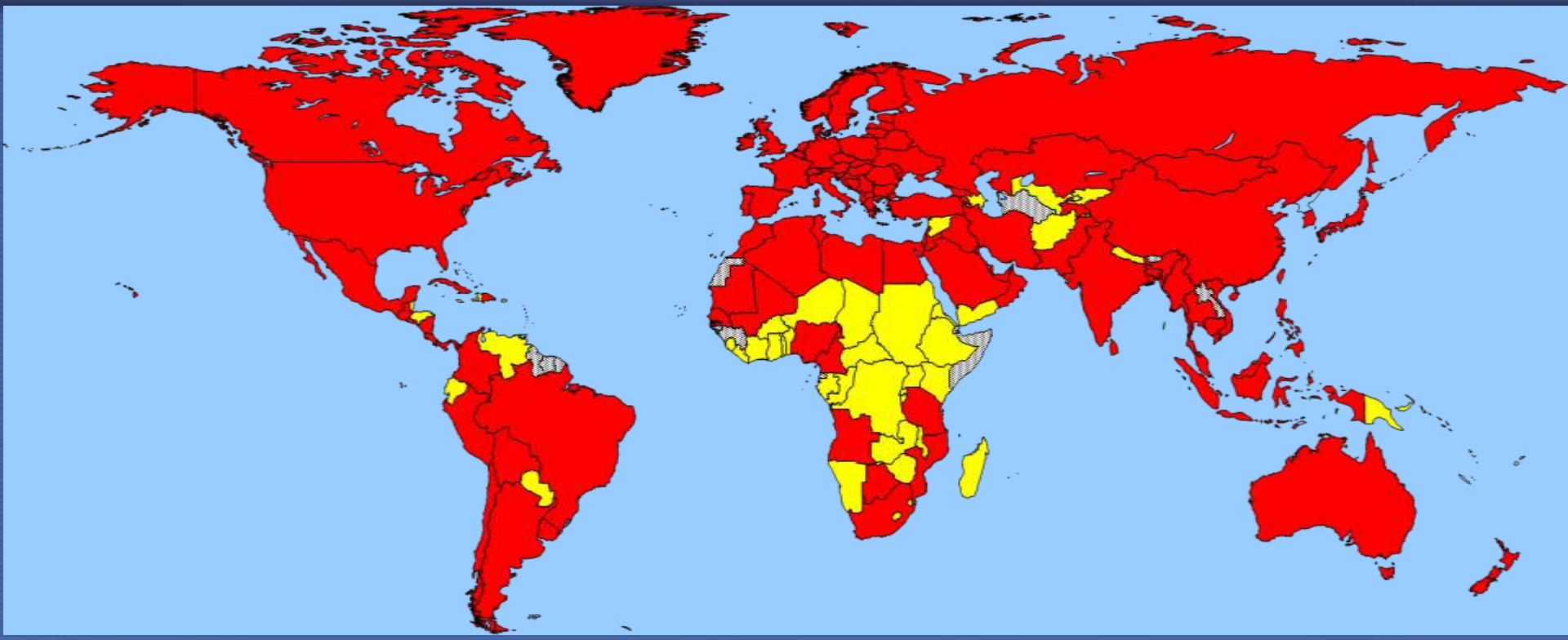
Early Notification Convention



IAEA Member States, Parties to the Convention

IAEA Member States, not Parties to the Convention

States, not IAEA Members, not Parties to the Convention

151 Member States
114 Parties including
FAO, WMO, WHO & EURATOM
(April 2012)

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Notification Convention
Response Obligations

- Forthwith notify potentially affected States and relevant international organizations
- Promptly provide additional information
  - time, location and nature of event
  - facility or activity involved
  - assumed or established cause
  - general characteristics of radioactive release
  - meteorological conditions
  - monitoring data
  - protective actions, and
  - predicted behavior of radioactive release

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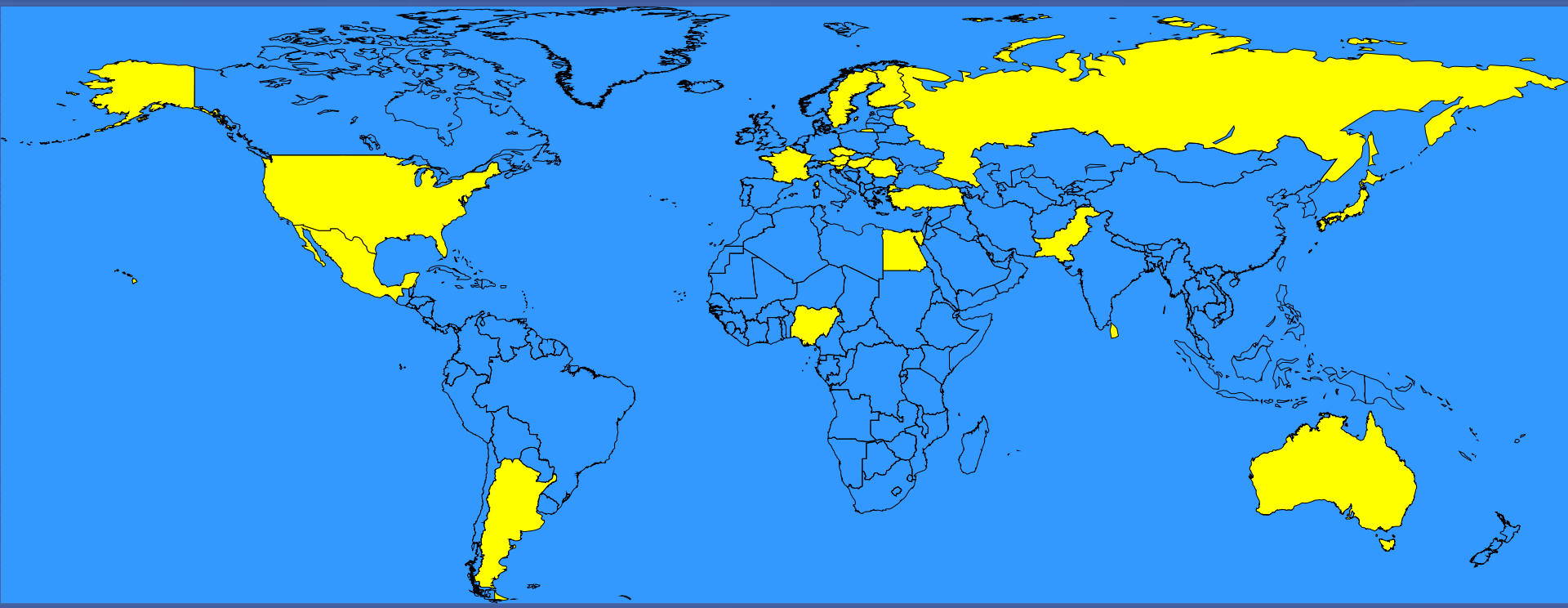
Countries Registered in RANET



Registered Member States

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The information flow

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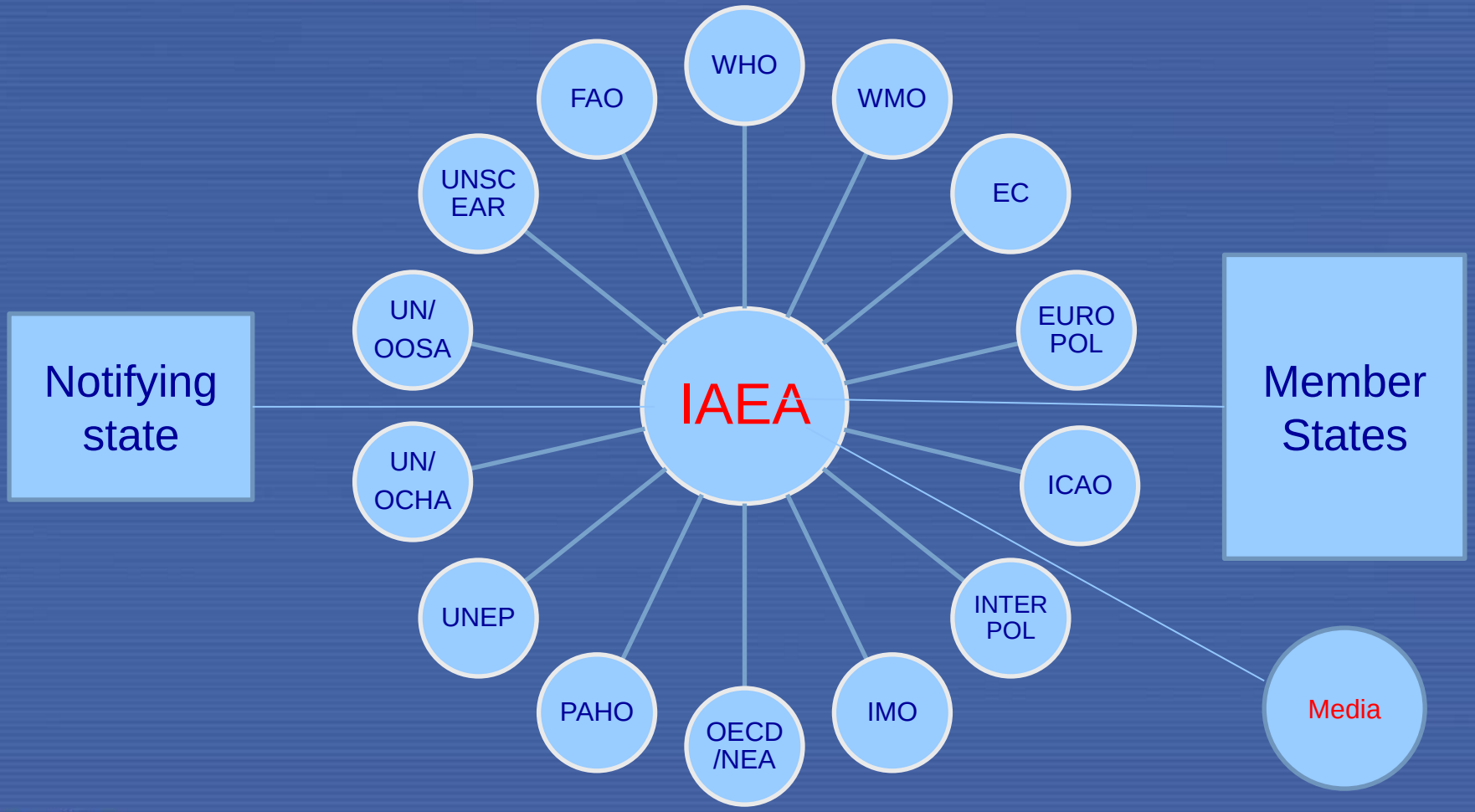
The ‘Joint Plan’



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IAEA Incident and Emergency Centre

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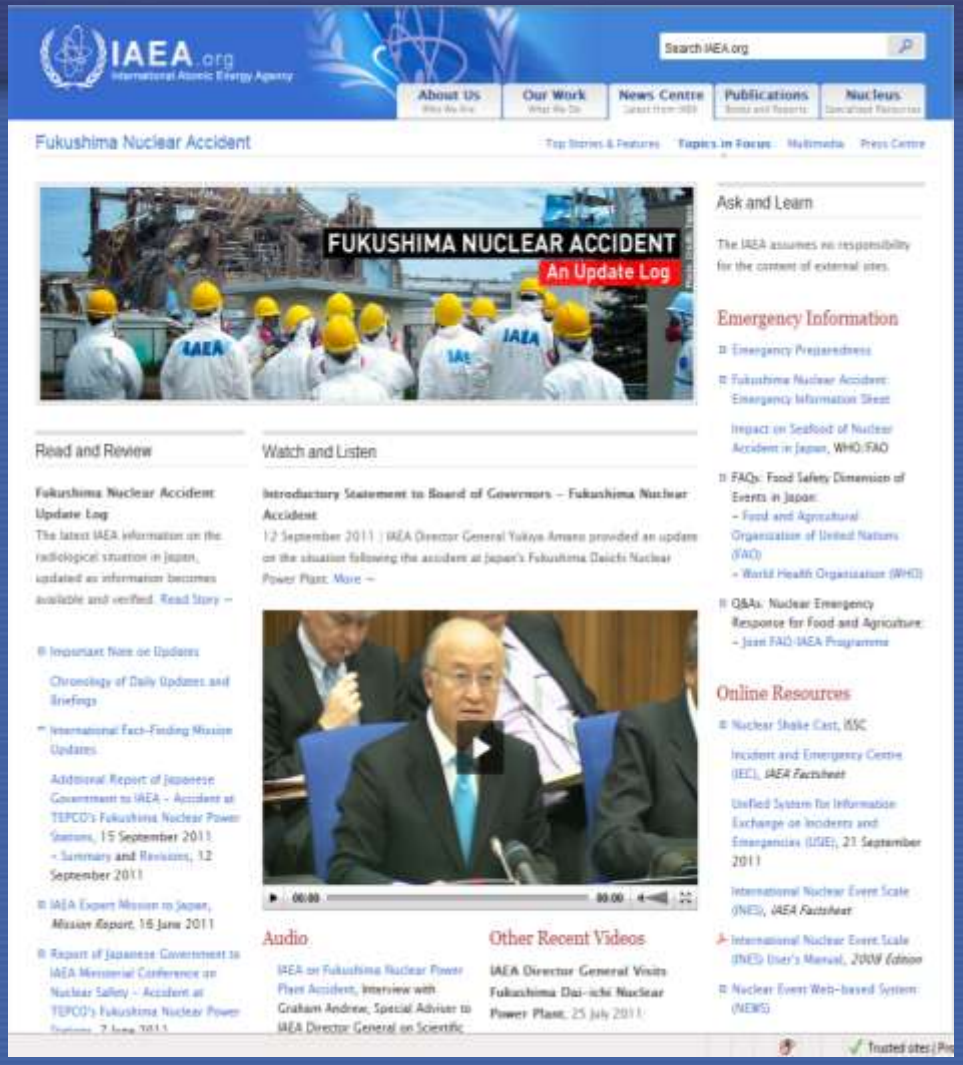
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The IAEA assumes no responsibility for the content of external sites.
Emergency Information
Emergency Preparedness
Fukushima Nuclear Accident: Emergency Information Sheet
Impact on Seafood of Nuclear Accident in Japan, WHO/FAO
FAQs: Food Safety Dimension of Events in Japan:
– Food and Agricultural Organization of United Nations (FAO)
– World Health Organization (WHO)
Q&As: Nuclear Emergency Response for Food and Agriculture:
– Joint FAO/IAEA Programme
Online Resources
Nuclear Shake Cast, ISSC
Incident and Emergency Centre (IEC), IAEA Factsheet
Unified System for Information Exchange on Incidents and Emergencies (USIE), 21 September 2011
International Nuclear Event Scale (INES), IAEA Factsheet
International Nuclear Event Scale (INES) User's Manual, 2008 Edition
Nuclear Event Web-based System (NEWS)
Read and Review
Fukushima Nuclear Accident Update Log
The latest IAEA information on the radiological situation in Japan, updated as information becomes available and verified. Read Story →
Important Note on Updates
Chronology of Daily Updates and Briefings
International Fact-Finding Mission Updates
Additional Report of Japanese Government to IAEA – Accident at TEPCO's Fukushima Nuclear Power Stations, 15 September 2011 – Summary and Revisions, 12 September 2011
IAEA Expert Mission to Japan, Mission Report, 16 June 2011
Report of Japanese Government to IAEA Ministerial Conference on Nuclear Safety – Accident at TEPCO's Fukushima Nuclear Power
Watch and Listen
Introductory Statement to Board of Governors – Fukushima Nuclear Accident
12 September 2011 | IAEA Director General Yukiya Amano provided an update on the situation following the accident at Japan's Fukushima Daiichi Nuclear Power Plant. More →
00:00
00:00
Audio
IAEA on Fukushima Nuclear Power Plant Accident, Interview with Graham Andrew, Special Adviser to IAEA Director General on Scientific
Other Recent Videos
IAEA Director General Visits Fukushima Dai-ichi Nuclear Power Plant, 25 July 2011
Trusted sites

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The challenges…

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Exploding demand

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The IAEA response

- 24/7 public info staffing, 11 March-22 April
- Thousands of phone calls (media/public)
- Thousands of e-mails (media/public)
- >120 update reports from IEC
- >260 updates to www.iaea.org
- Daily (later weekly) media briefings

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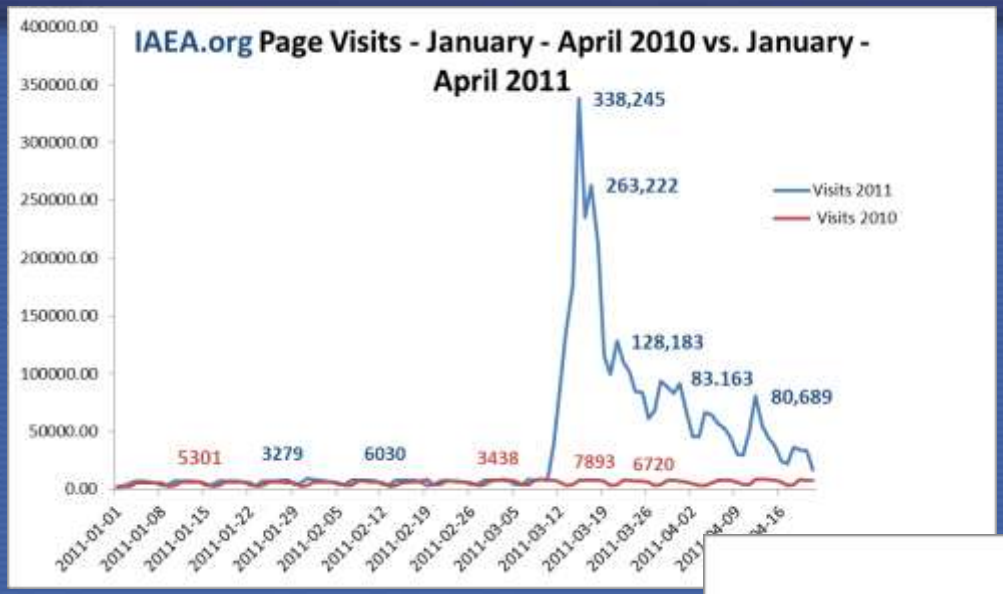
The IAEA as a reference for the public



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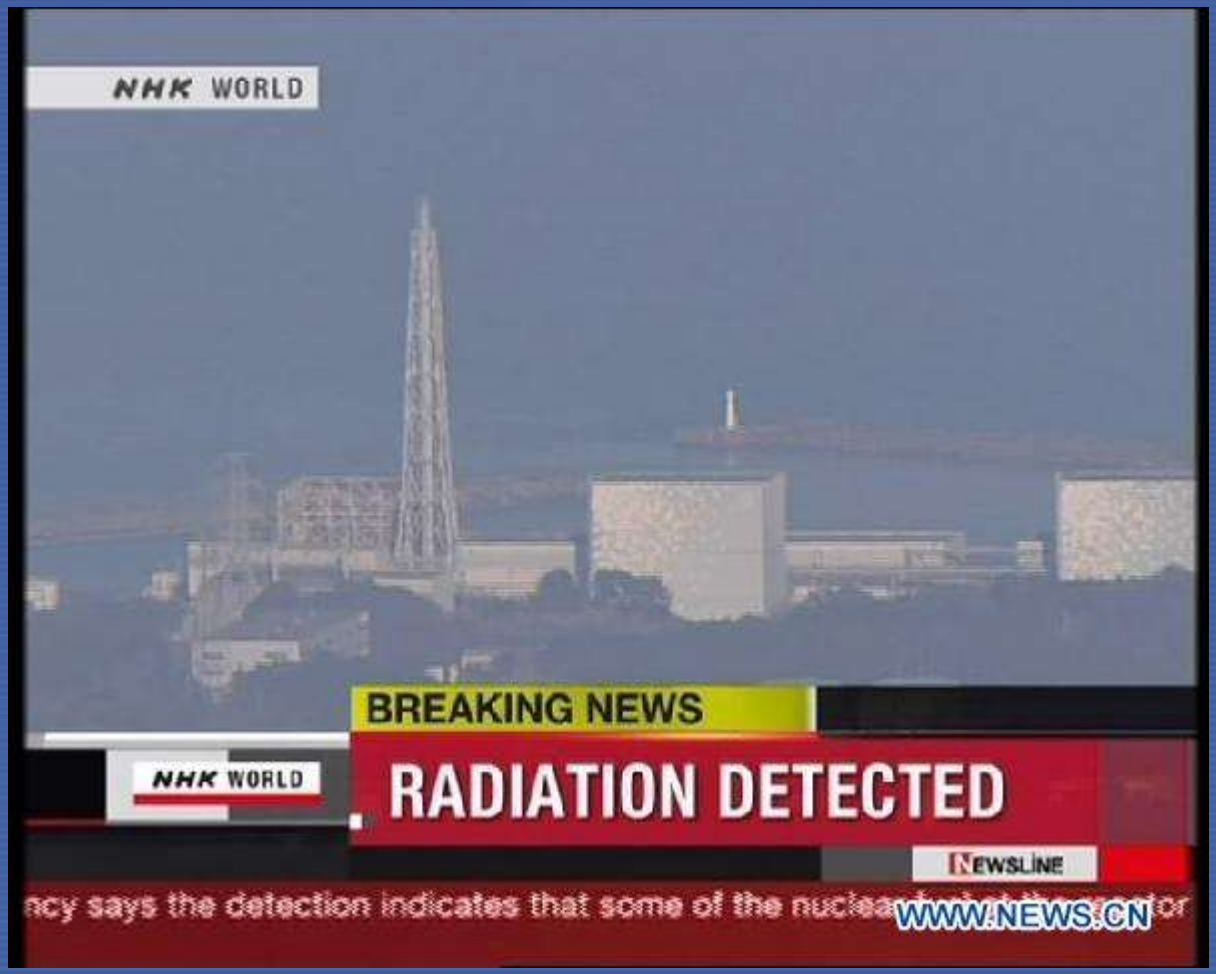
The information race



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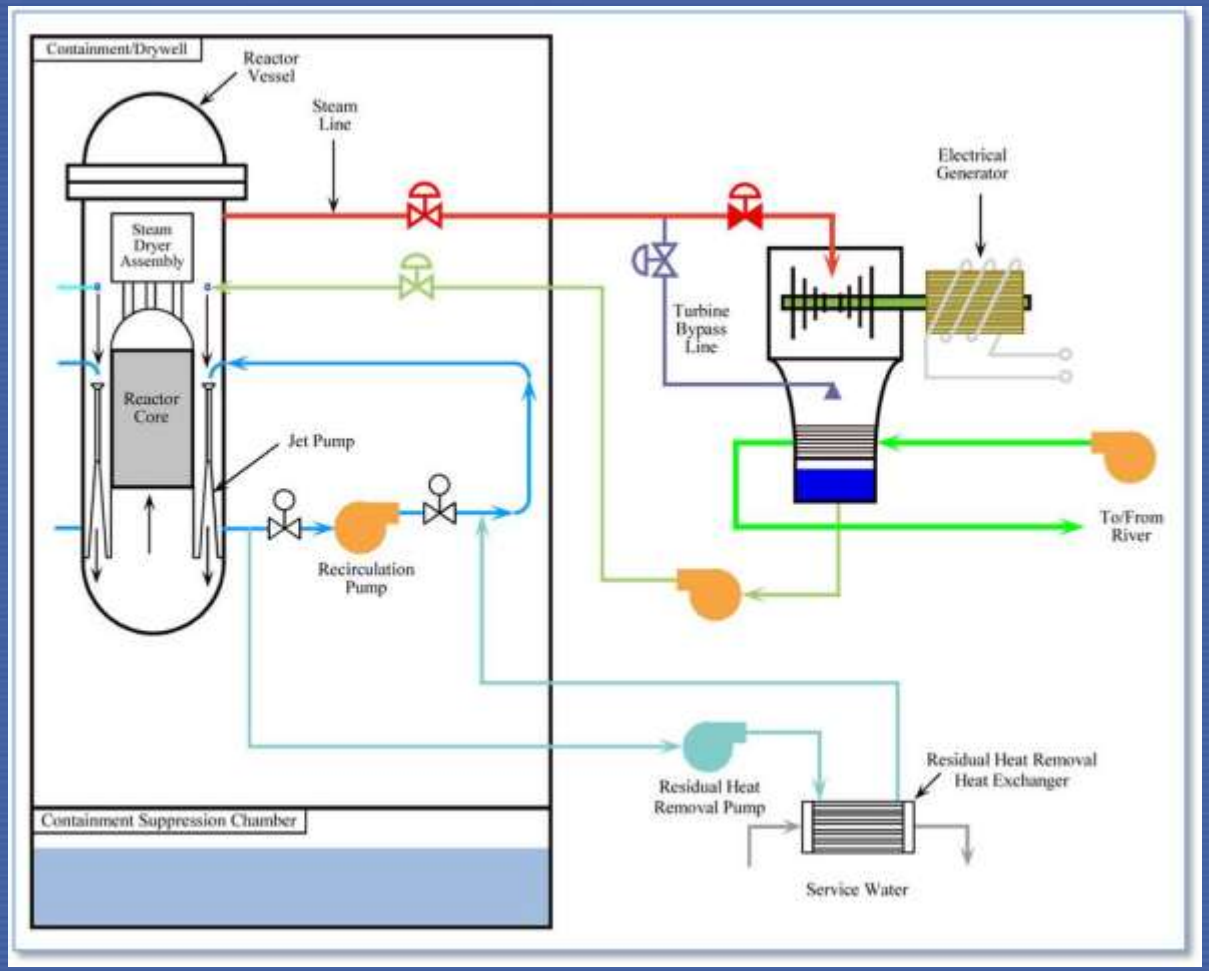
The need to explain



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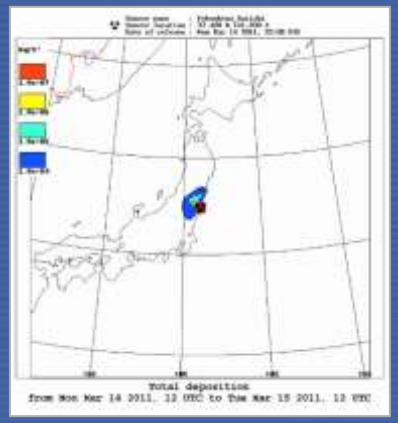
MS/Press Briefings

- Daily/Weekly MS Briefings
  - Status of Fukushima Daiichi NPP
  - Radiological Status on site and off site
  - Marine monitoring
  - Food monitoring

Unit	1	2	3	4
Power (MWe-MWth)	460/1380	784/2381	784/2381	784/2381
Type of Reactor	BWR-3	BWR-4	BWR-4	BWR-4
Status at time of EQ	In service – auto shutdown	In service – auto shutdown	In service – auto shutdown	Outage
Core and fuel integrity	Damaged	Severe damage	Damaged	No fuel in the Reactor
RPV & RCS integrity	RPV temperature high but slowly decreasing	RPV temperature stable	RPV temperature stable	Not applicable due to outage plant status
Containment integrity	No information	Damage suspected	Damage suspected	
AC Power	AC power available - power to instrumentation - Lighting in Control Control Room	AC power available - power to instrumentation - Lighting in Control Control Room	AC power available - power to instrumentation - Lighting in Control Control Room	AC power available - power to instrumentation - Lighting in Control Control Room
Building	Severe damage	Slight damage	Severe damage	Severe damage
Water level of RPV	Assumed fuel at least is uncovered	Assumed fuel at least is uncovered	Assumed fuel at least is uncovered	Not applicable due to outage plant status
Pressure of RPV	Slowly increasing	Stable	Stable	
CV Pressure Drywell	Stable	Stable	Stable	
Water injection to RPV	Injection of freshwater - via mobile electric pump with off-site power	Injection of freshwater - via mobile electric pump with off-site power	Injection of freshwater - via mobile electric pump with off-site power	
Water injection to CV	No information	No information	No information	
Spent Fuel Pool Status	Fresh water injection by concrete pump truck	Freshwater injection to the Fuel Pool Cooling Line	Freshwater injection via Fuel Pool Cooling Line and Periodic spraying	Fresh water injection by concrete pump truck



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An independent view…

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Lessons learned

IAEA Action Plan on Nuclear Safety

'Enhance transparency and effectiveness of communication and improve dissemination of information'

- "The IAEA Secretariat to provide Member States, international organizations and the general public with timely, clear, factually correct, objective and easily understandable information during a nuclear emergency on its potential consequences, including analysis of available information and prognosis of possible scenarios based on evidence, scientific knowledge and the capabilities of Member States."

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Communication and dissemination of information

Action Plan

- Strengthen the emergency notification system
- Enhance the transparency and effectiveness of communication among operators, regulators and various international organizations
- Review application of INES scale as a communication tool
- Organize international experts meetings IEMs

Key Achievements

- International Experts' Meetings IEMs
  - Reactor and Spent Fuel Safety March 2012
  - Transparency and Communication June 2012
  - Remediation and Decommissioning March 2013
  - Workshop on Seismic and Tsunami Hazards ~ Sept 2012
- Ministerial Conference on Nuclear Safety December 2012
- Effective Regulatory Systems Conference Canada April 2013

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Communication and dissemination of information

- INES as a communication tool did not play its role: it should be reviewed and improved to make it more effective
- Action Plan: "…review of INES as a communication tool…":
  - hence no changes in number of levels and criteria
  - identified issues related to applying methodology for severe, complex and evolving event
- Secretariat with support of INES Advisory Committee and NEA as cosponsor, is developing additional guidance on use of INES in severe accidents

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International Experts' Meeting on reactor and fuel safety

- **"The IAEA should make available the information from the experts' meeting to the Safety Standards Committees and the Commission of Safety Standards (CSS)."**

- **"The lessons that were discussed at the meeting should be considered in the response to the Action Plan and evaluated for incorporation into IAEA SS."**

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Lessons learned

- **"Universal implementation of the IAEA Safety Standards on emergency preparedness and response at the national level would improve preparedness and response, facilitate communication in an emergency and contribute to harmonization of national criteria for protective and other actions."** (Ministerial conference summary)

- **The implementation of the Action Plan on Nuclear Safety already allows the Secretariat to widen its communication Mandate;**

- **Review of E.N. & A. Conventions (including implementation mechanisms) may strengthen this trend.**

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Thank you