



The Updated IAEA International Nuclear Event Scale Reporting System

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Overview

- History & milestones
- Main features of the INES Scale
- Basic Structure
- Event rating examples
- Worldwide & U.S. experience (2004-2008)
- Conclusions

INES Main Features

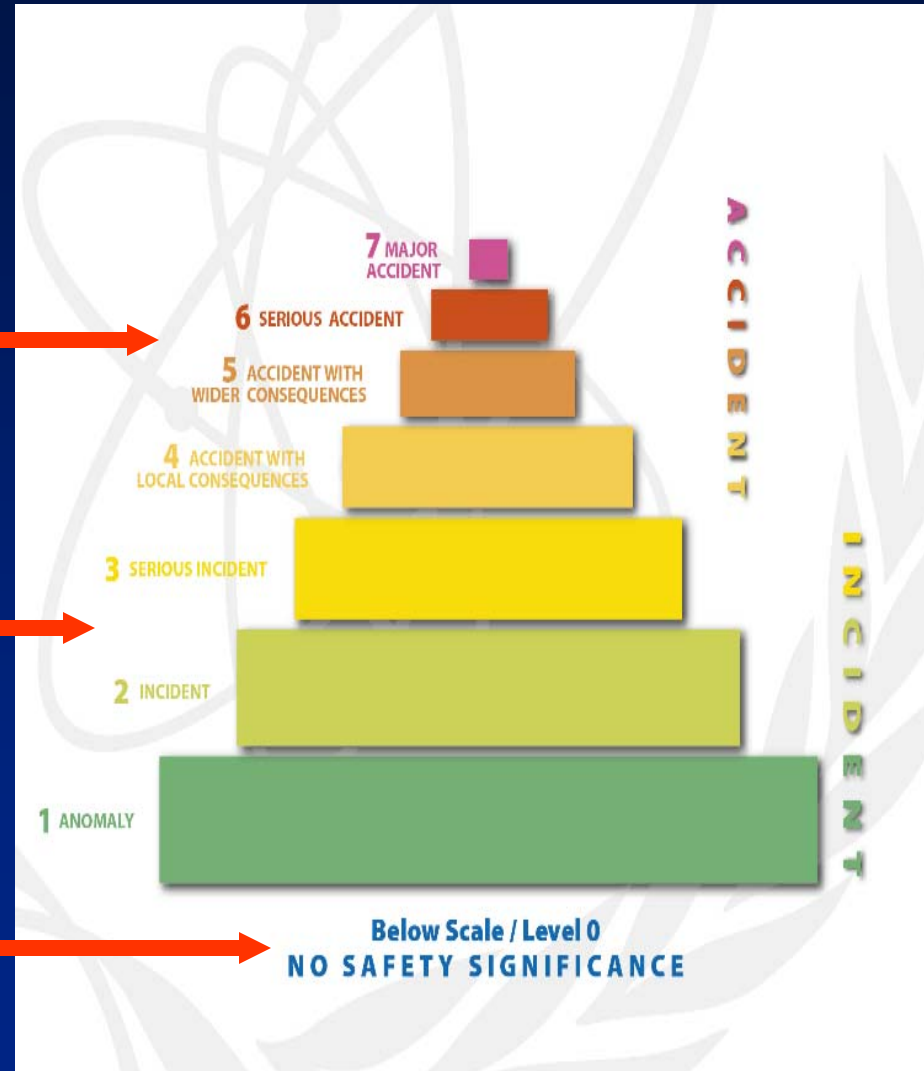
- **Prompt** communication to the public
- **Consistency** in terms of safety significance
- Operating successfully in **more than 60** countries
- Can be applied to **any event** associated with radioactive material
- Events are classified on a **scale from 1 to 7**

INES Classification

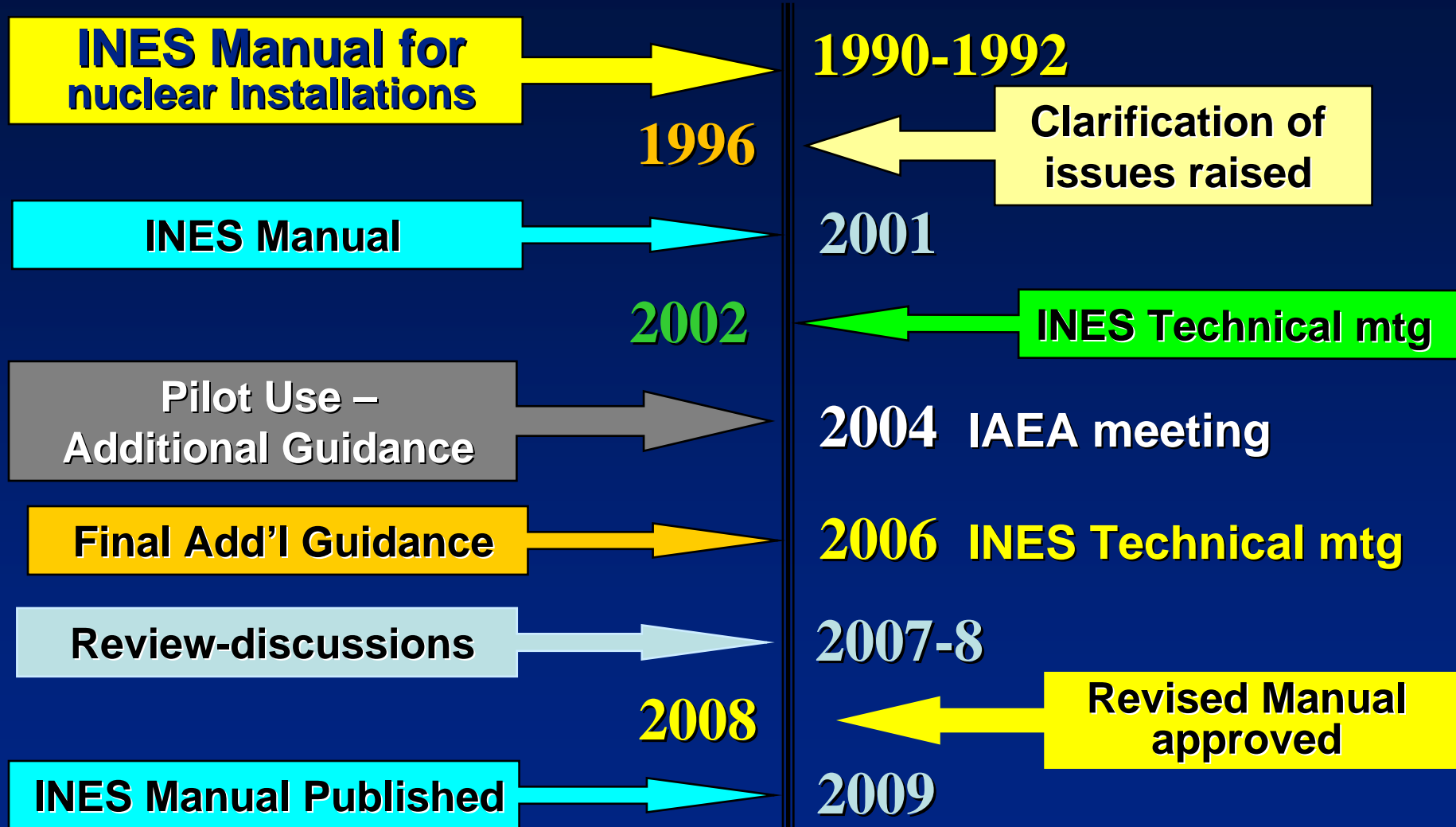
Levels 4 to 7 - “Accidents”

Levels 1 to 3 - “Incidents”

Level 0 – “Deviations”



INES Scale: Milestones



<http://www-pub.iaea.org/MTCD/publications/PubDetails.asp?pubId=8120>

What INES does...

- **Contributes to common understanding** of incidents and accidents
- Events of public interest are disseminated **transparently**
- Brings **uniform** terminology
- Increases **credibility** and **reassurance**

What INES *does not do*...

- Does not replace the existing national criteria for the reporting of events
- Cannot be used to compare safety or regulatory programs between countries

INES Criteria

3 different areas considered in evaluating the event:

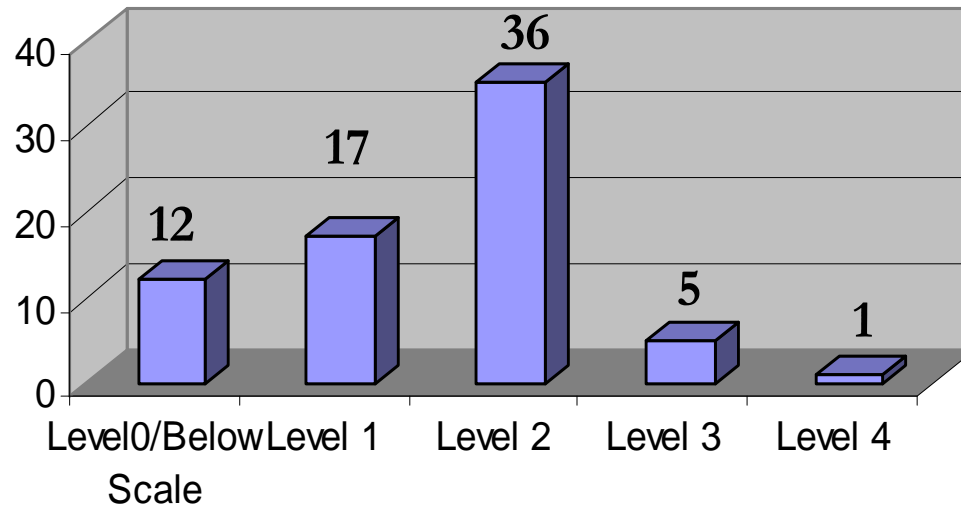
1. *People and the environment*

2. *Radiological barriers and controls at facilities*

3. *Defence-in-Depth*

Continuously improving:

- Less than 200 users when it started in 2001
- More than 1500 users
 - Increasing number of visits to NEWS
- 70 events posted worldwide (2006-08)





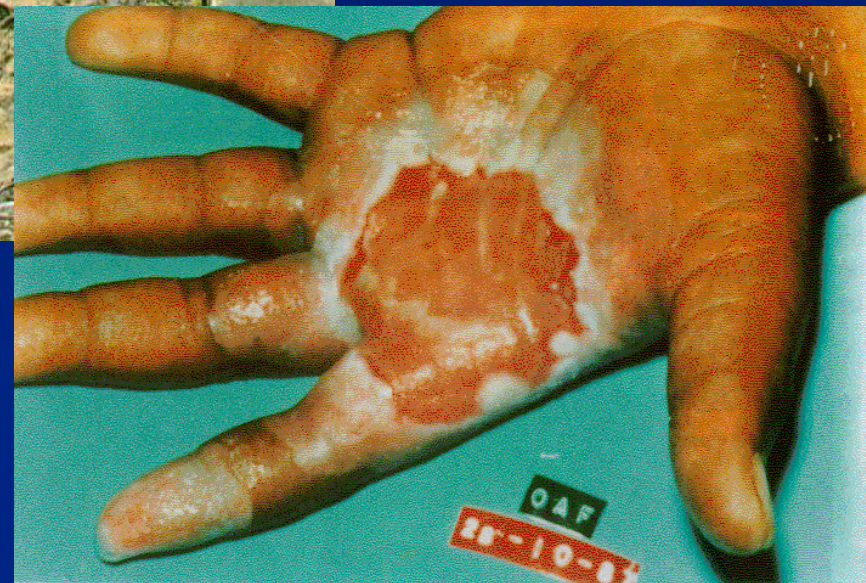
Previous INES Events



Previous INES Events



Goiânia





INES Examples of Previous Events

Event	Rating
Chernobyl (1986)	7
Kyshtym (1957)	6
Windscale (1957)	5
Goiânia (1987)	5
Three mile island (1979)	5
Tokaimura (1999)	4
Vandellos (1989)	3
Industrial radiographer worker overexposure	2

U.S. Experience – INES 2004-08

Year	Power Reactor Events	Research Reactor Events	Fuel Cycle Events	Materials Events	TOTAL
2004	0	0	0	6	6
2005	2	0	0	9	11
2006	0	1	1	8	10
2007	0	0	0	3	3
2008	0	0	0	4	4

U.S. Experience – INES 2004-08

Year	Radiography	Radiation Sources	Irradiators
2004	2	3	1
2005	8	1	0
2006	6	2	0
2007	2	1	0
2008	3	1	0

Distribution on INES Scale

U.S. Experience – INES 2004 – 2008

LEVEL	Number of Events
0	1
1	4
2	28
3	1

Conclusions



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