

International Nuclear Event Scale (INES)

INES: A scale developed by the IAEA and OECD/NEA that represents the degrees of nuclear incidents, accidents and events in seven levels.

	Level	Criteria			Examples (Also includes the events that are not formally rated by INES.)
		Criteria1: People and the environment	Criteria2: Radiological barriers and controls at facilities	Criteria3: Defense in depth	
Inc/Accident	7 Major accident	- Major release of radioactive material with widespread health and environmental effects.			Chernobyl NPP, USSR (now in Ukraine), 1986 ----- Fukushima Daiichi NPP, Japan, 2011 (Provisional rating)
	6 Serious accident	- Significant release of radioactive material.			
	5 Accident with wider consequences	- Limited release of radioactive material. - Several deaths from radiation.	- Severe damage to reactor core. - Release of large quantities of radioactive material within an installation with a high probability of significant public exposure.		Three Mile Island NPP, USA, 1979
	4 Accident with local consequences	- Minor release of radioactive material. - At least one death from radiation.	- Fuel melt or damage to fuel resulting in more than 0.1% release of core inventory. - Release of significant quantities of radioactive material within an installation with a high probability of significant public exposure.		Tokaimura fuel processing facility, Japan, 1999
Incident	3 Serious incident	- Exposure in excess of 10 times the statutory annual limit for workers. - Non-lethal deterministic health effect from radiation.	- Exposure rates of more than 1Sv/hr in an operating area. - Severe contamination in an area not expected by design, with a low probability of significant public exposure.	- Near accident at a nuclear power plant with no safety provision remaining. - Lost or stolen highly radioactive sealed source.	
	2 Incident	- Exposure of a member of the public in excess of 10mSv. - Exposure of a worker in excess of the statutory annual limits.	- Radiation levels in an operation area of more than 50mSv/hr. - Significant contamination within the facility into an area not expected by design.	- Significant failures in safety provisions but with no actual consequences.	Mihama NPP Unit 2, Japan, 1991
	1 Anomaly			- Overexposure of a member of the public in excess of statutory limits. - Low activity lost or stolen radioactive source.	- Monju fast breeder reactor, Japan, 1995 - Hamaoka NPP, Japan, 2001 - Mihama NPP Unit 3, Japan, 2004
Below scale	0 Below scale	No safety significance		0+	Event that could possibly challenge safety requirements.
				0-	Event that did not challenge safety requirements.
Out of scale		No safety relevance			

Note: Sievert (Sv) is a unit of effective dose of radiation.
(1mSv = 1/1000 of a sievert)

Translation of a table in Graphical Flip-chart of Nuclear & Energy Related Topics 2012 published by the Federation of Electric Power Companies of Japan