

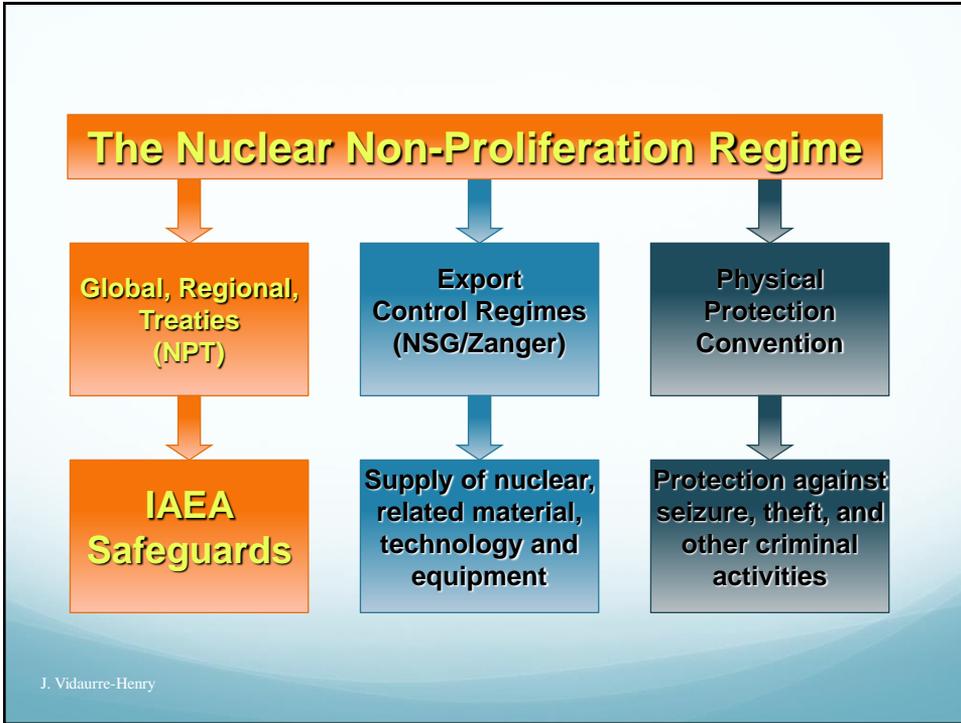
The Nuclear Non-Proliferation Regime and NPT legal principles

**J. Vidaurre-Henry
International Consultant**

Outline

- From 1939 to “atoms for peace”, 1953
- The creation of the IAEA, 1953 to 1957
- The first Safeguards Systems, 1961 and 1965/1968
- Tlatelolco and NPT, 1967 and 1970
- Strengthening the System: 1991 onwards
- Current proliferation cases
- NPT legal principles

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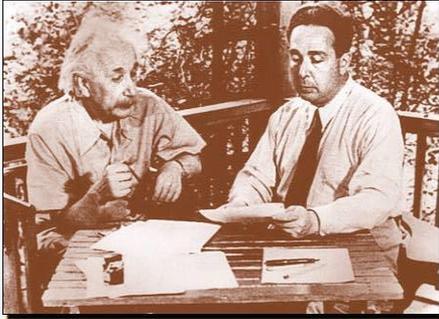


From 1939 to “atoms for peace”,
1953

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This slide features a light blue gradient background with the text 'From 1939 to “atoms for peace”, 1953' centered in a dark blue font. The author's name 'J. Vidaurre-Henry' is located in the bottom right corner.

Invention and use of the bomb



- Letter to President Roosevelt, 2 August 1939:
 - USA to arm before Germany did so.
 - Drafted by Szilard, Teller and Einstein

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The Manhattan Project

- Started in 1942
- Secret project
- Practically unlimited funds



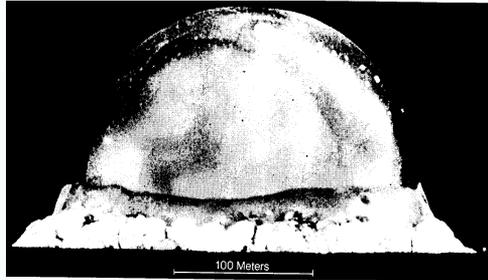
Dr. J. Robert Oppenheimer
Laboratory Director



Maj. Gen. Leslie R. Groves
Project Director

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Trinity Test

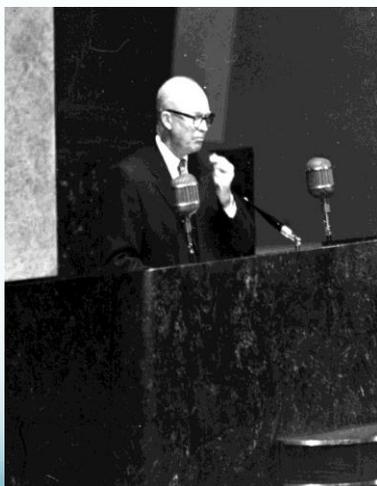


The first nuclear explosion in “Jornada del Muerto”, Alamogordo, New Mexico, 16 July 1945

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Atoms for Peace

Eisenhower’s Speech at the UN, 8 December 1953



- “An international Agency for Atomic Energy”
- Under the UN
- Responsible for Nuclear Material (NM)
- Promote peaceful applications of atomic energy.
- Verification of peaceful use of nuclear material

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The creation of the IAEA, 1953 to 1957

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The Creation of the IAEA: Drafting the Statute

Conference in Washington (February - March 1956)

- 12 “interested countries”
- Draft statute prepared by the US in March 1955

Conference in New York

(September 1956)

- “Gathering” of 81 countries at UN Headquarters
- Revised statute approved (23 October 1956)
- The Statute of the IAEA

IAEA Statute in force 29 July 1957: The IAEA was created.

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The Mandate: IAEA Statute (1957)

Art. III. Functions

- **A. 5.** Establish and administer Safeguards designed to ensure that special fissionable and other materials...made available by the Agency ...are not used in such a way as to further any military purpose; and to apply safeguards *at the request of the the parties, to any bilateral or multilateral arrangement...*

Art. XII Agency Safeguards

- **A.** With respect to any Agency Project...

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Relations With the United Nations



UN Headquarters in New York

Article XVI:

- Annual Report to the UN General Assembly
- Report to the Security Council

Result:

- Autonomous independent, science and technology-based, intergovernmental organization
- Within the UN System

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The first Safeguards Systems, 1961 and 1965/1968

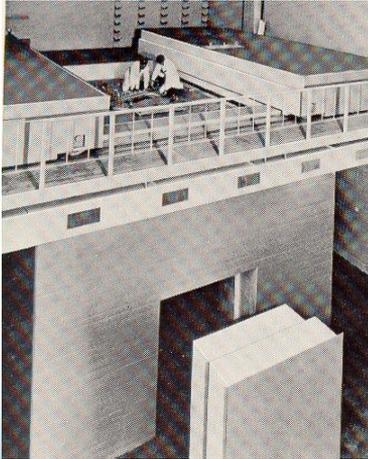
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The First Safeguards Systems

- The Agency's Safeguards System of January 1961: INFCIRC/26
- The first extensive Agency's Safeguards System of February 1965: INFCIRC/66
- INFCIRC/66 Rev 1 and 2 (1966 and 1968)
Still applied for certain facilities in India, Israel and Pakistan

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1962: The First Safeguards Inspection



Verification of design of a 3
MW(th) reactor in Norway

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Tlatelolco and NPT, 1967 and 1970

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The Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Tlatelolco Treaty, 1967)



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- 1962 Cuban missile crisis
- Opened for signature on 14 February 1967
- Experience helpful for NPT negotiations
- Signed by all Latin American and Caribbean countries

The Nuclear Non-proliferation Treaty (NPT)

Background

- Missile crisis in Cuba (1962)
- France and China joined the 'Nuclear Club' (1960 and 1964)
- Limited Test Ban Treaty (USA + USSR, 1963)
- Negotiated at the "Eighteen- Nation Disarmament Committee" in Geneva (1965 to 1968)
- Draft text agreed in 1968
- Opened for signature on 1 July 1968
- Entered into force 5 March 1970
- Extended indefinitely in May 1995

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NPT Treaty



- Parties to accept safeguards by the IAEA
- To prevent diversion from peaceful uses
- Safeguards applied on all source and fissionable material within states' territories

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Comprehensive Safeguards Agreements

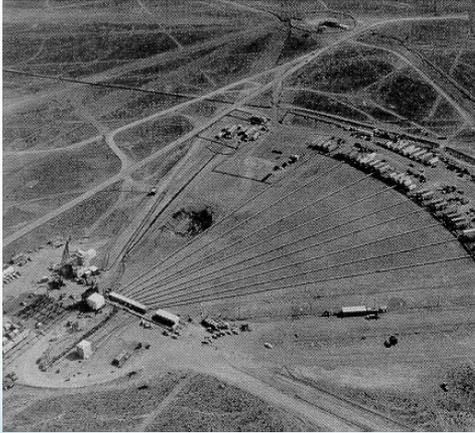
- Negotiated at the Safeguards Committee (1970)
- Basis for negotiations: INFCIRC/153



Dr. Kurt Waldheim, Chairman of the Safeguards Committee

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India's Explosion (1974)



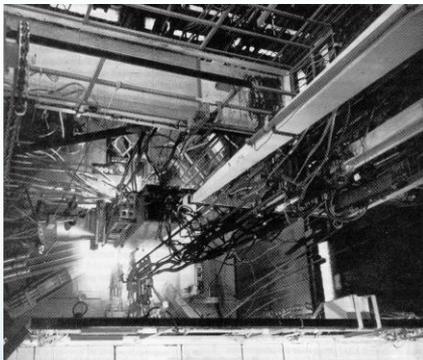
Underground test site in Nevada, USA

At Pokharan, Rajasthan

- Underground explosion
- 10-15 KT
- No violation of a treaty or agreement

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The Bombing of the Tammuz Reactor



- French design, 40 MW (th), MTR
- Located in Tuwaitha near Baghdad (Iraq)
- Bombed by Israeli aircraft (7 June 1981)
- The GC suspended Israel's rights to technical assistance, September 1982
- Report sent to Security Council, UN
- Temporary withdrawal of the US from the IAEA, September 1982 to February 1983

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South Africa's Nuclear Capabilities



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- Board of Governors (BOG) proposed to suspend SA's rights and privileges (June 1987)
- General Conference deferred consideration
- South Africa acceded NPT on 10 July 1991
- President F.W. de Klerk disclosed nuclear weapons programme in 1993
- Influenced to extend the NPT indefinitely

Strengthening the System: 1991 onwards

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Libya

- In December 2003 Libya revealed the existence of a clandestine uranium enrichment programme
- IAEA visited Tripoli to initiate verification
- Enrichment technology had been purchased on the black market ('AQ Khan network')
- IAEA completed verification activities in Libya and concluded that all past and present nuclear activities had been accounted for



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The Additional Protocol to Safeguards Agreements type INFCIRC/153

- Negotiated at the "Committee 24"
 - (Open ended Committee appointed by the Board)
- Additional legal authority
 - Information
 - Access
- In force or otherwise applied for 120 states (as of 7 June, 2013)

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Current proliferation cases

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Iran

- Press report August 2002:
 - Enrichment in Natanz
 - Heavy Water at Arak
- Iran's statement at IAEA's GC Sept. 2002
- Visit and "declaration" March 2003



Mr Reza Aghazadeh, Iran at a Press Briefing during the IAEA General Conference, Vienna, Austria, September 21, 2004 Credit: D. Calma, IAEA

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Report to the IAEA Board of Governors (10 November 2003)

- Implementation of the safeguards agreement in Iran:

“Iran has failed to meet its obligations under its safeguards agreement with respect to the reporting of nuclear material, the subsequent processing and use of that material and the declaration of facilities where the material was stored and processed”



Bushehr reactor under construction 2003

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Iran (Cont')

- BOG resolution 2003:
 - Failures to report NM, facilities and activities
 - Iran to suspend uranium enrichment-related activities and reprocessing
- Fourty two reports to the BOG (as of June 2013)
 - (One including “possible military dimensions”, in 2011)
- 12 BOG resolutions
- Seven UNSC resolutions



Bushehr reactor before commissioning (Source WNN 2007)

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Iran (Cont')

- Four sets of sanctions by UNSC, US, EU and other nations:
 - Arms, trading and financial resources
- Iran questions the authenticity of data and the legality of sanctions and resolutions
- Hassan Rouhani elected president (8/2013)
 - Light at the end of the tunnel or just wishful thinking?

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DPRK

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DPRK: Two decades of non compliance

- April 1992 SA in force
- May 1992 first inspections
 - Inconsistencies declarations/findings
- February 1993: Special Inspection requested/denied
- Completeness/ correctness of declarations could not be confirmed!



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Source Wikipedia Commons

Two decades of non compliance (cont')

- March 1993: Withdrawal from NPT
- Report to UNSC and GA UN
- June 1993: withdrawal suspended
- Oct 1994 "Agreed Framework" US/DPRK
- May 1994 to Dec 2002 Freeze monitoring



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Two decades of non compliance (cont')

- Dec 2002 US: enrichment programme
 - Inspectors expelled
- Jan 2003: Withdrawal from NPT
- Oct 2006: Nuclear explosion
- Feb 2007: agreement six parties



*The scene before Yongbyon's cooling tower toppled
(Image: Gao Haorong/AP/PA Photos)
Source : WNN*

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Two decades of non compliance (cont')

- July 2007-April 2009: Monitoring
- April 2009: Rocket launch, UNSC condemnation
- May 2009: Inspectors expelled again
- Aug 2009: Second explosion
- May 2011: assistance to Syria's reactor Dair Alzour



*Kim Jong Un has been leader since mid-December 2011.
Source WNN*

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Syria

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Syria

- Bombardment of Dair Alzour site, September 2007, allegedly by Israeli Aircraft
- IAEA received information: Gas-cooled, graphite moderated reactor, in cooperation with DPRK
- Clearing and leveling: October 2007
- IAEA visit on June 2008: ES taken
 - Particles of anthropogenic natural uranium were found
 - Same as found in MNSR



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Syria (cont')

- Request for clarifications and further access sent to Syria:
 - Syria denied building a reactor
 - Not enough water
 - Unreliable, insufficient energy supply
 - No human resources
 - NU from Israeli missiles
 - No cooperation with DPRK



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Syria (Cont')

- IAEA requested clarifications:
 - Procurement of large amounts of Barite
 - Procurement of large amounts of graphite (nuclear grade)
 - Origin of anthropogenic NU
 - Documentation on building
- No access to building nor equipment debris, neither to other related locations



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Syria (cont')

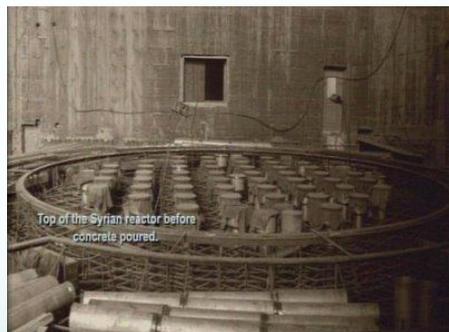
- Routine inspection at MNSR
- Visit to Homs phosphoric acid plant (1 April 2011)
- Further information received from IAEA Member States



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Syria (Cont')

- IAEA Report to BOG (May 2011):
- No cooperation from Syria on Dair Alzour
- Building likely a reactor
- Adequate pumping capacity
- Similar to DPRK's Yongbyon



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Syria (Conclusion)

- BOG IAEA decision, June 2011:
 - Breach of NPT Safeguards Agreement and non-compliance
 - Report to UN Security Council and General Assembly
- But...



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The Nuclear Non-Proliferation Treaty

Main provisions

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The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) 1970

- Preamble: Agreement on the prevention of wider dissemination of Nuclear Weapons (NW)
- NW States (NWS) not to transfer NW, nor to assist encourage NNWS to manufacture NW
- NNWS not to manufacture or acquire NW
- NNWS to accept Safeguards as set for an an agreement with the IAEA

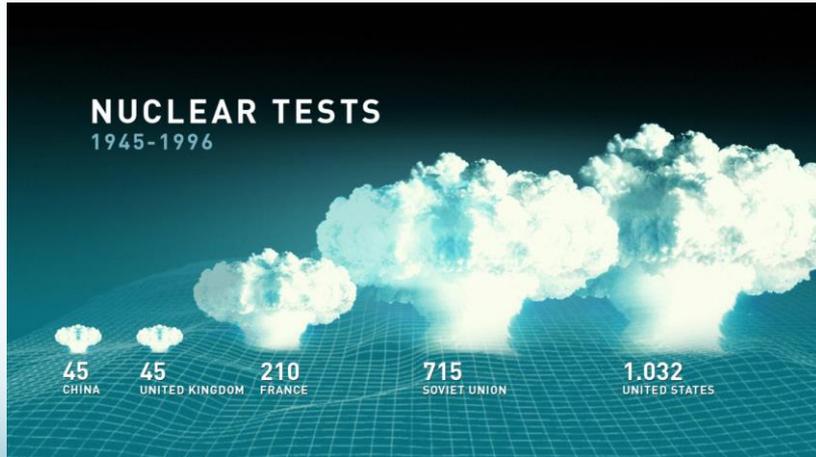
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The Treaty on the Non-Proliferation of Nuclear Weapons (Cont')

- Not to affect the “inalienable right” to develop, research and use Nuclear Energy for peaceful uses
- Pursue negotiations to cessation of arms race and nuclear disarmament
- “NWS” is one which has manufactured and exploded a NW before Jan 1, 1967

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NPT's Nuclear Weapon States



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Image Source: CTBTO www.ctbto.org

Other Nuclear Weapon States (non NPT)

- India
- Pakistan
- Israel (?)
- DPRK (was NPT)



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Ivy Mike test. Source CTBTO www.ctbto.org

Where do we stand?

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Nuclear Nonproliferation

- The global nuclear order faces an unprecedented array of challenges—including (DPRK), Iran and Syria's noncompliance, the emergence and persistence of proliferation networks and the perceived threat of nuclear terrorism, among others.
 - (Carnegie Endowment for International Peace)
- The nuclear nonproliferation regime is key to prevent the further spread of nuclear weapons
 - International Safeguards deters and prevents non compliance

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Strengthening Safeguards

- Disclosure of clandestine nuclear activities in Iraq & DPRK led to consensus for stronger IAEA safeguards
 - More information from States
 - More access for inspectors
 - Model Additional Protocol adopted by Board in 1997
 - More support from States
- Current and future challenges for the IAEA secretariat and Member States

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Summary

The Non-Proliferation Regime:

- Genesis: “Atoms for Peace” speech
- Strengthened when the NPT came in force, 1970
- Strengthened with the Additional Protocol
- Challenged in international events

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END

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