

UNLEASHING THE NUCLEAR WATCHDOG

STRENGTHENING AND REFORM OF THE
INTERNATIONAL ATOMIC ENERGY AGENCY

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Overview



- the project
- why the IAEA and this study matter
- contemporary challenges
- nuclear safety: IAEA response to Fukushima as exemplar
- management and financial reform
- conclusions and recommendations

The project



- two-year project co-sponsored by Centre for International Governance Innovation (CIGI) and Canadian Centre for Treaty Compliance (CCTC)
- outgrowth of *The Future of Nuclear Energy to 2030 and its Implications for Global Governance* (2010)
- project aim: a ‘root and branch’ examination of IAEA’s performance with a view to advancing ideas about its future
- first complete study since Larry Scheinman’s *The IAEA and World Nuclear Order* (1987)
- study to be published in mid-2012 (followed by a book)

Contents of study



- Introduction
- Origins and mandate
- Governance and leadership
- Major programs
 - Nuclear safeguards and verification
 - Nuclear Safety
 - Nuclear Security
 - Promotion of peaceful uses of nuclear energy
- Management and administration
- Technology
- Finance and budget
- Conclusions

Why the IAEA (and this study) matters



IAEA remains the paramount instrument of global nuclear governance

- vital mediator of the nonproliferation/peaceful uses bargain
- unique role in nuclear safeguards
- key player in seeking to resolve international crises over non-compliance —Iraq, Iran, North Korea
- new post-Fukushima responsibilities in nuclear safety
- potentially increasingly important role in nuclear security
- key role in taming excesses of a nuclear energy revival

Contemporary challenges



- Overall performance: above average but unrealized potential
- Governance: increasingly perceived as politicized (General Conference and Board of Governors)
- Safeguards: considerably strengthened but more possible, especially on undeclared facilities/materials
- Nuclear safety: Fukushima response flawed, but new mandates
- Nuclear security role: not central but expanding
- Funding: Zero real growth and dysfunctional work-arounds
- Management: dragging itself into the 21st century

Nuclear Safety



Increased IAEA role post-Chernobyl

- 1986 Convention on Early Notification
- 1986 Convention on Assistance
- 1994 Nuclear Safety Convention and reviews
- 1997 Joint Convention on Spent Fuel/Nuclear Waste Management
- IAEA Safety Standards and technical assistance, including OSART peer reviews

IAEA response to Fukushima: the good



- Incident and Emergency Response Center activated immediately
- member states informed via ‘competent authorities’
- Agency assistance offered to Japan
- scores of staff volunteer for emergency duties
- effective use of website and social media
- eventual dispatch of monitoring teams; fact-finding and advisory missions

IAEA response to Fukushima: the not so good



- DG acts only after Western pressure: You-Tube statement and visit to Tokyo
- Press/member state briefings slow to begin, uninformative and not media-savvy
- only information from/cleared by Japan used initially
- assistance clearing-house role did not eventuate (but assistance network, RANET, unprepared anyway)
- IAEA's coordination of international agencies slow and incomplete
- International Nuclear and Radiological Event Scale confusing

Nuclear safety reform



- implement Action Plan: leadership, funding
- revise nuclear safety standards
- upgrade emergency communications and preparedness
- pursue options for mandatory IAEA-led peer review
- increase IAEA role in peer reviews
- pursue greater cooperation with WANO
- revise INES
- convene international regulators to establish global body
- establish a global nuclear safety network

Nuclear safety as exemplar



- ❑ Over-blown expectations
- ❑ Under-use of existing authorities
- ❑ Proliferation of plans, programs, units
- ❑ Deficient public information and media skills
- ❑ Undeveloped relationships with nuclear industry
- ❑ Uneven relationships with other international organizations
- ❑ Poor support from member states for plans, mechanisms
- ❑ Under-funding

Management

- IAEA one of the more effective and efficient UN-type organizations
- 2002 management consultants report: praised reformist inclination but saw 'systems stress' and 'individualist organizational culture'
- recommended 'One House' approach; Results-Based Management; Change Management Strategy
- lip-service paid to these concepts since but little action except in Safeguards Department; increased funding, IT reforms
- Agency remains 'stove-piped'; lacks modern management approaches and internal transparency; both too centralized (worse under Amano) and too decentralized (proliferation of programs and units); still lacks modern IT, finance and information sharing tools
- No Strategic Plan: 5-Year Mid-Term Plan virtually useless

Management – reform ideas



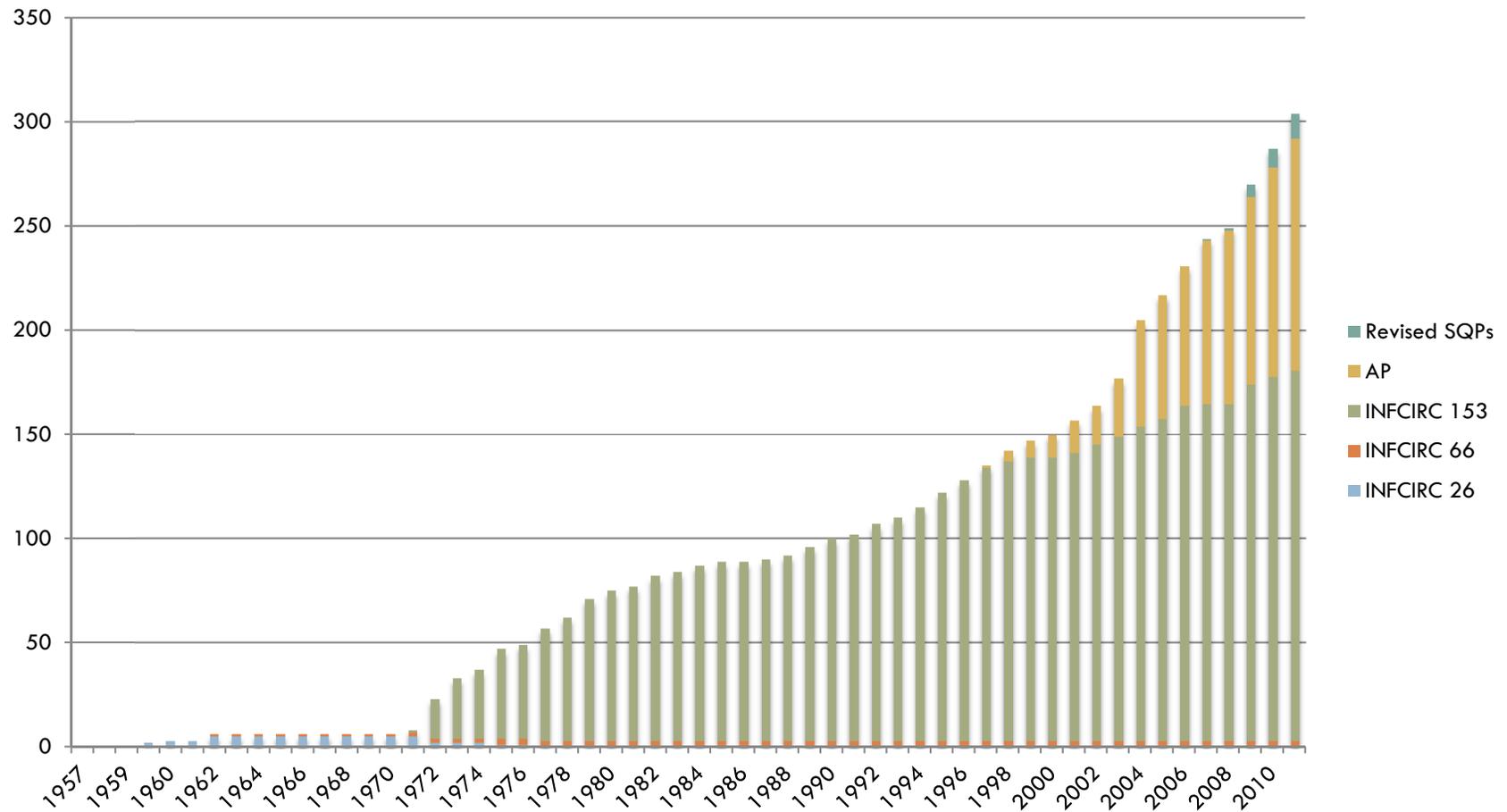
- develop an in-house Strategic Plan
- commission a new, more wide-ranging and less time-constrained management consultancy review
- better manage unintended consequences of 7-year retirement rule
- adopt transparent and flexible personnel system by seeking exemption from UN Common System
- pursue current IT & RBM reforms to improve in-house transparency, management and budgeting

Finance and budget



- Zero Real Growth since 1985: Agency 'leaner and meaner' but cuts increasingly counter-productive: infrastructure, technology, human resources
- increasing dependence on voluntary contributions and secondment of experts, including for core functions like safeguards & nuclear security
- long-running battle over spending priorities: safeguards vs Technical Cooperation
- huge increase in statutory and other responsibilities (safeguards, verification, nuclear safety, nuclear security)

Growth of IAEA safeguards 1957-2011



Approximate Quantities of Material Subject to Agency Safeguards (in SQs)

Nuclear Material	2000	2010	% Change	
Plutonium contained in irradiated fuel and in fuel elements in reactor cores	81,700	132,505	+62%	
Separated plutonium outside reactor cores	9,031	11,881	+32%	
HEU (equal to or greater than 20% ²³⁵ U)	604	232	-62%	
LEU (less than 20% ²³⁵ U)	13,204	16,955	+28%	
Source Material (natural or depleted uranium and thorium)	6,990	10,589	+51%	
Non-nuclear material				
Heavy water	25	441.7	+1667%	

Budget and finance – reform ideas



- grand budgetary bargain: include all core functions, TC and cost-free experts into regular budget; fix budget proportions by agreement; end shielding system; end refunds
- gradually introduce user-pay system for technical reviews and assistance; nuclear energy plans
- proper study of projected future needs to inform budget process and satisfy major donors
- adopt Resource Mobilization Strategy
- establish Contingency Fund and Endowment Fund

Conclusions and recommendations



- various initiatives to strengthen and reform currently taking place, but need constant vigilance
- increased transparency — internally and externally — is key to transforming many of the Agency's traditional deficits: safeguards, TC, management, recruitment and promotion and stakeholder support
- new, comprehensive external management study is vital
- grand budget deal and new funding models should be seriously examined
- study on future financial requirements should be undertaken to satisfy major funders
- increased funding

Strategic questions for the future



- does the governance structure, notably the BOG, need reform? can it be reformed?
- should the IAEA be broken up into promotional and regulatory parts?
- how can Agency advise on nuclear energy policy when it has no expertise in alternatives to nuclear energy?
- is the IAEA the most suitable verification organization for FMCT, or in the longer term for assisting with nuclear disarmament?