

Accuracy

Performance

Accountability



The Nuclear Materials Management and Safeguards System (NMMSS)

NMMSS

2014

Annual Users Training Meeting

May 12-15, 2014

Denver, Colorado

Governing the (very) Front End of the Fuel-Cycle

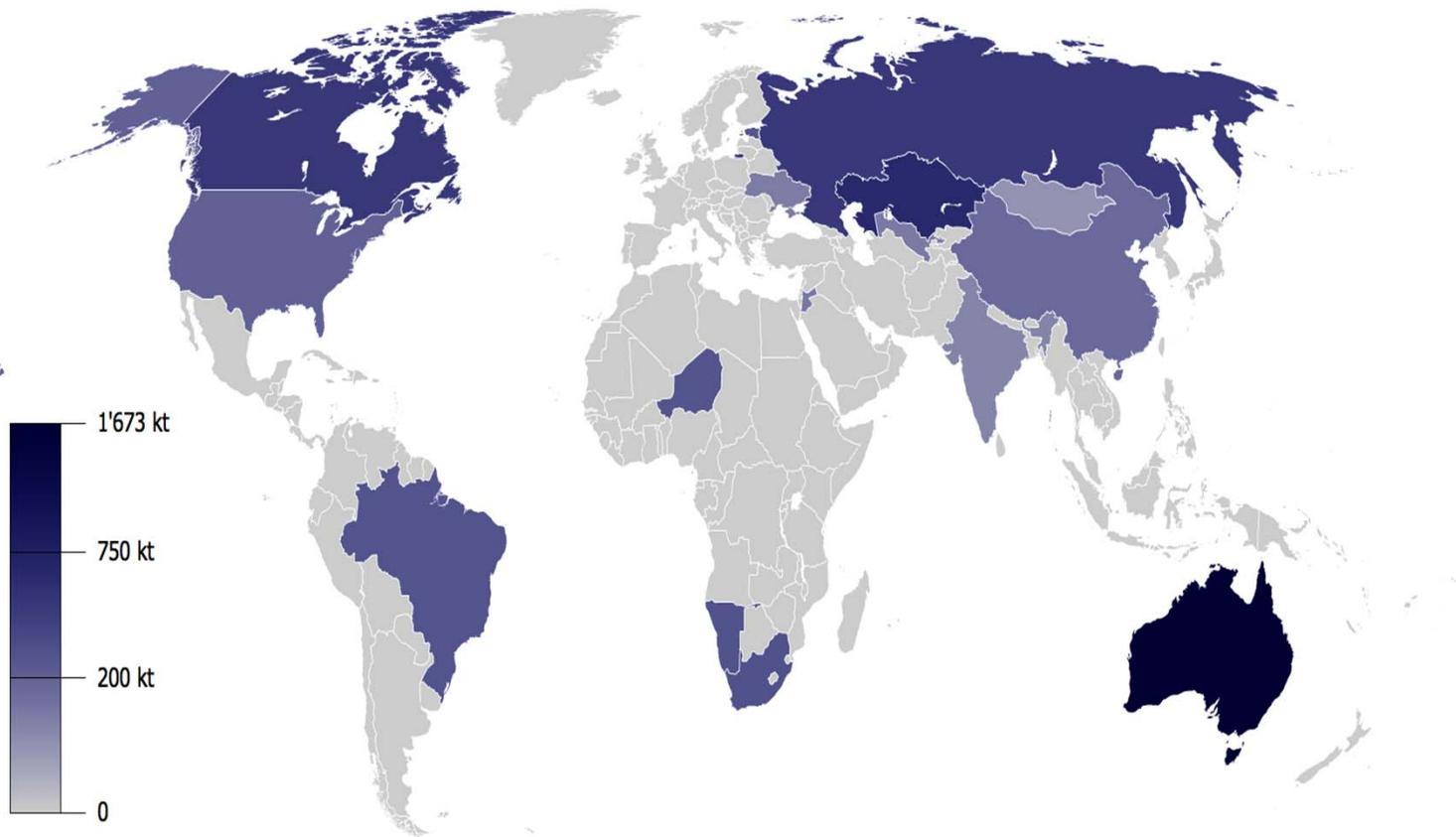
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Danish Institute for International Studies (DIIS)





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Shifting Geographies



Governing Uranium

- 2.5 year project -1 January 2013 to 30 July 2015
- focus on 16 (possibly 17) uranium producing and consuming countries
- seek to understand different safety, security, safeguards, and industry practices that govern natural uranium production and trade (up until the point of conversion)
- Explore current industry best practice of leaders in the industry, including self-regulation at the company level and CSR initiatives

Policy Relevance

- assist newcomers in developing nationally-appropriate regulatory systems from scratch based on global best practices
- assist the IAEA in quest to clarify at what point uranium becomes subject to safeguards
- provide recommendations for addressing governance gaps

Intl/Regional Regs

- **IAEA Safeguards not apply to ore or ore residue**
 - PP #18 and 21
 - CSAs 34a/b reporting of yellowcake imports/exports
 - Monthly reporting usually in tonnes
 - Additional Protocol
 - Art 2 – location, operational status, estimated & current annual production of uranium mines and concentration plants
- **Euratom - SG do apply to ores**
 - Commission Regulation (Euratom) 302/2005, natural uranium is subject to same reporting requirements as any other nuclear material
 - Material Balance Report, Physical Inventory Listing, Advance Notification of imports/exports, etc
- **CPPNM – physical protection applies to UOC (but not ores or ore residue)**

Bilateral Agreements

- Wide variation in conditions of supply and verification
 - U a ‘strategic resource’
 - Australia – the gold standard?
 - Niger uranium imported in France is “free of use”: belongs to category “N” known in Euratom obligation codes, “materials not submitted to a Euratom or IAEA commitment”
 - issue whether free use would be sustainable with development of triangular relationship between France, Niger, and China.
 - Bilats with India and China
 - Bilats with transit countries

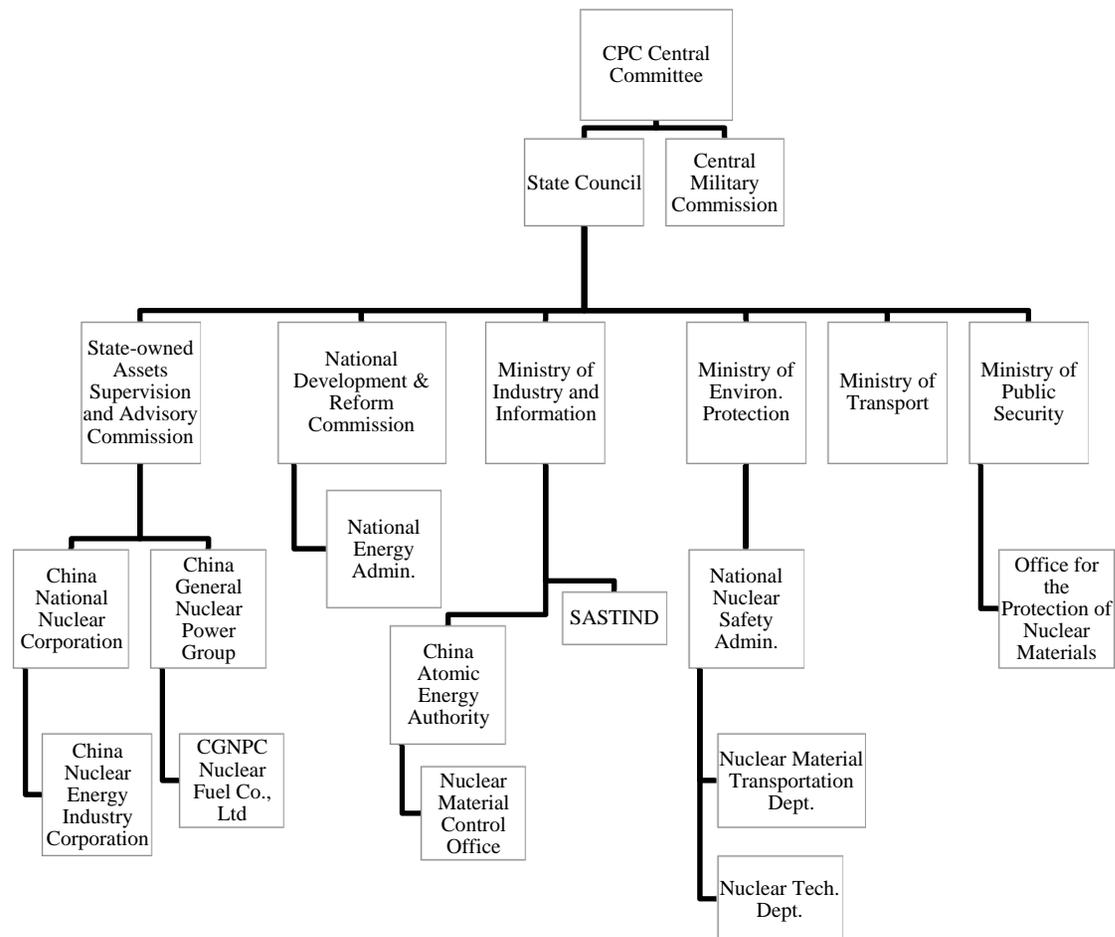
Inventory Control - Australia

- Accounting begins as soon as UOC in the drum
- Industry provides inventory change documents to ASNO
- ASNO reports to IAEA on monthly basis
 - Used to report tonnes, now report containers
 - Based on info from bilateral partners, industry, shipping and transfer documentation, knowledge of fuel cycle in ea country, IAEA SG and bilateral visits and exchanges
- ASNO requires holders of AONM to submit regular reports, consent requests, transfer and receipt documentation
- At mine: limited access to packing area
- Each labelled with weight and purity, sealed with metal ribbon (ASNO certifies seals)
- Assay before shipment and sample sent ahead to converter

Inventory Control – United States

- NRC and Agreement State program licensees that possess more than 1kg of **foreign obligated** source material must report
- U at mines, facilities, mills or conversion plants that is imported or exported must be reported
- 2001 GAO expressed concerns regarding accuracy of data and whether licensees were upholding commitments to report foreign-obligated material
 - Amendments to reporting requirements, no info on how rigorously inspectors investigate discrepancies

China



Best Practices

- Clear definitions and legislation/regulations
- Clear non-proliferation/uranium supply policy
- Clearly defined, independent competent authorities
- Inspection and enforcement provisions which are implemented
- Regular consultation with industry
- Bilateral treaties to frame UOC trade
- Digitalised inventory database, inventory control
- Well-trained, educated staff
- Need for separation of military from civilian cycles