

International Cooperative Efforts for Minimizing the Use and Presence of HEU: The IAEA's Work

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IAEA

International Atomic Energy Agency

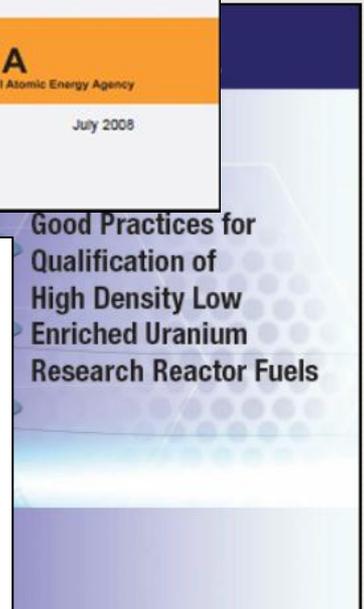
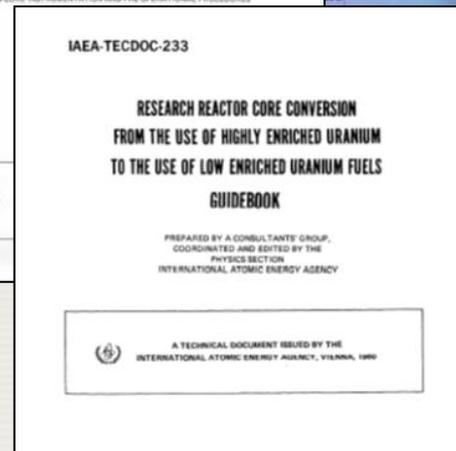
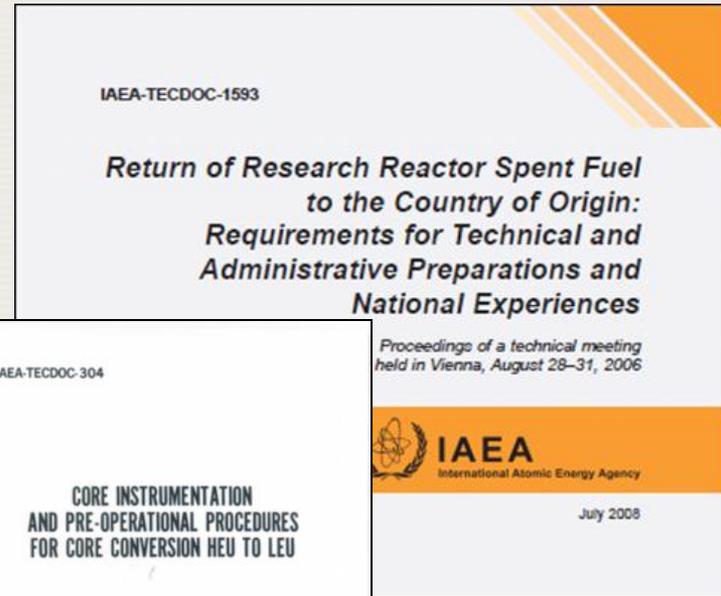
The IAEA's Role in Minimizing HEU

The IAEA's Statute calls on the Agency to “accelerate and enlarge the contribution of atomic energy to peace, health and prosperity....[and to] ensure that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose.”



The IAEA's Role in Minimizing HEU

- The Agency does not have a written policy on minimization of HEU.
- However, at the request of Member States, we work on the issue, providing solutions tailored to their specific needs.



IAEA Activities Assisting Minimization

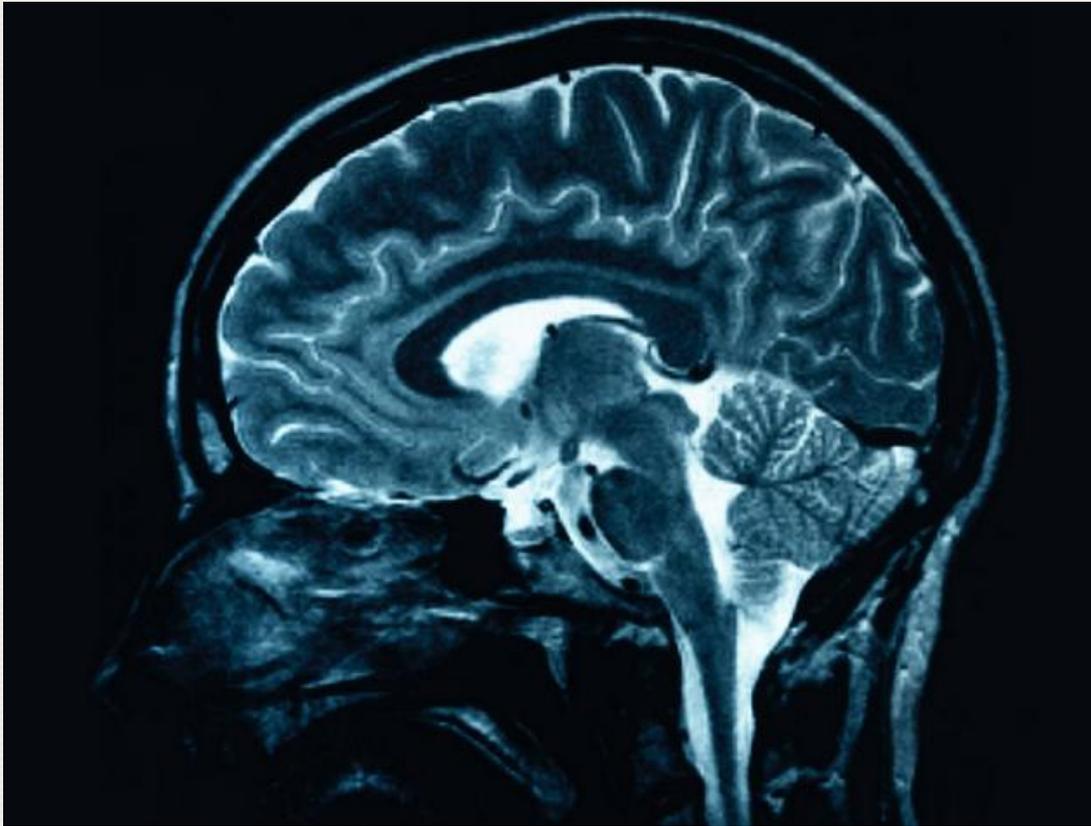
Dept. of Nuclear Safety and Security

Assisting with physical protection and safe utilization of nuclear materials and technologies



IAEA Activities Assisting Minimization

Dept. of Nuclear Sciences and Applications



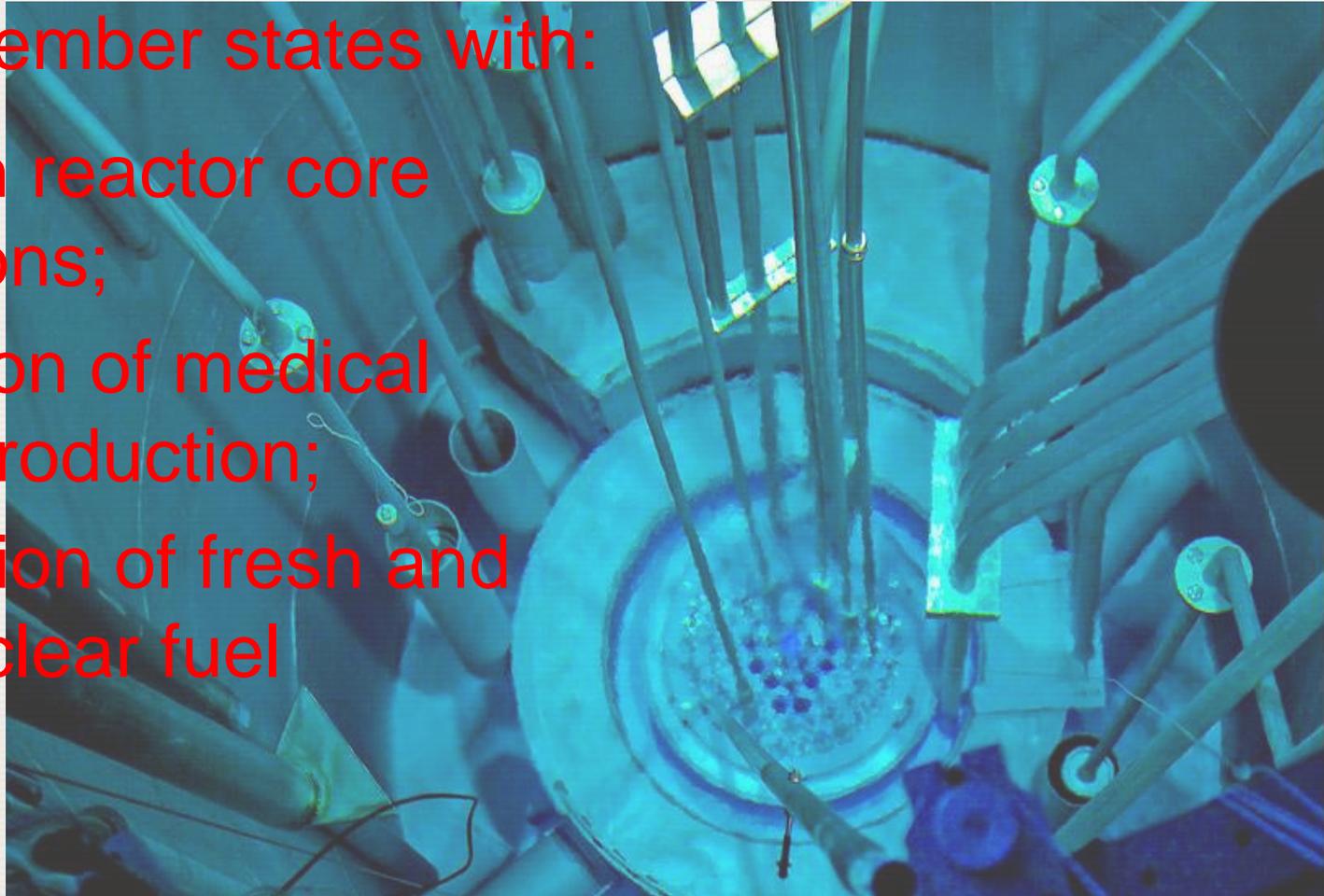
Assisting
Member
States develop
and use
nuclear
technologies
that do not rely
on HEU

IAEA Activities Assisting Minimization

Department of Nuclear Energy

Assisting member states with:

- Research reactor core conversions;
- Conversion of medical isotope production;
- Repatriation of fresh and spent nuclear fuel



Research Reactor Core Conversion

- IAEA tailors each project to address the relevant constraints:
 - design of reactor and fuel
 - technical needs of the member state
 - local nuclear infrastructure
 - available resources

Core Conversion Work



Core Conversion Work



Core Conversion Work



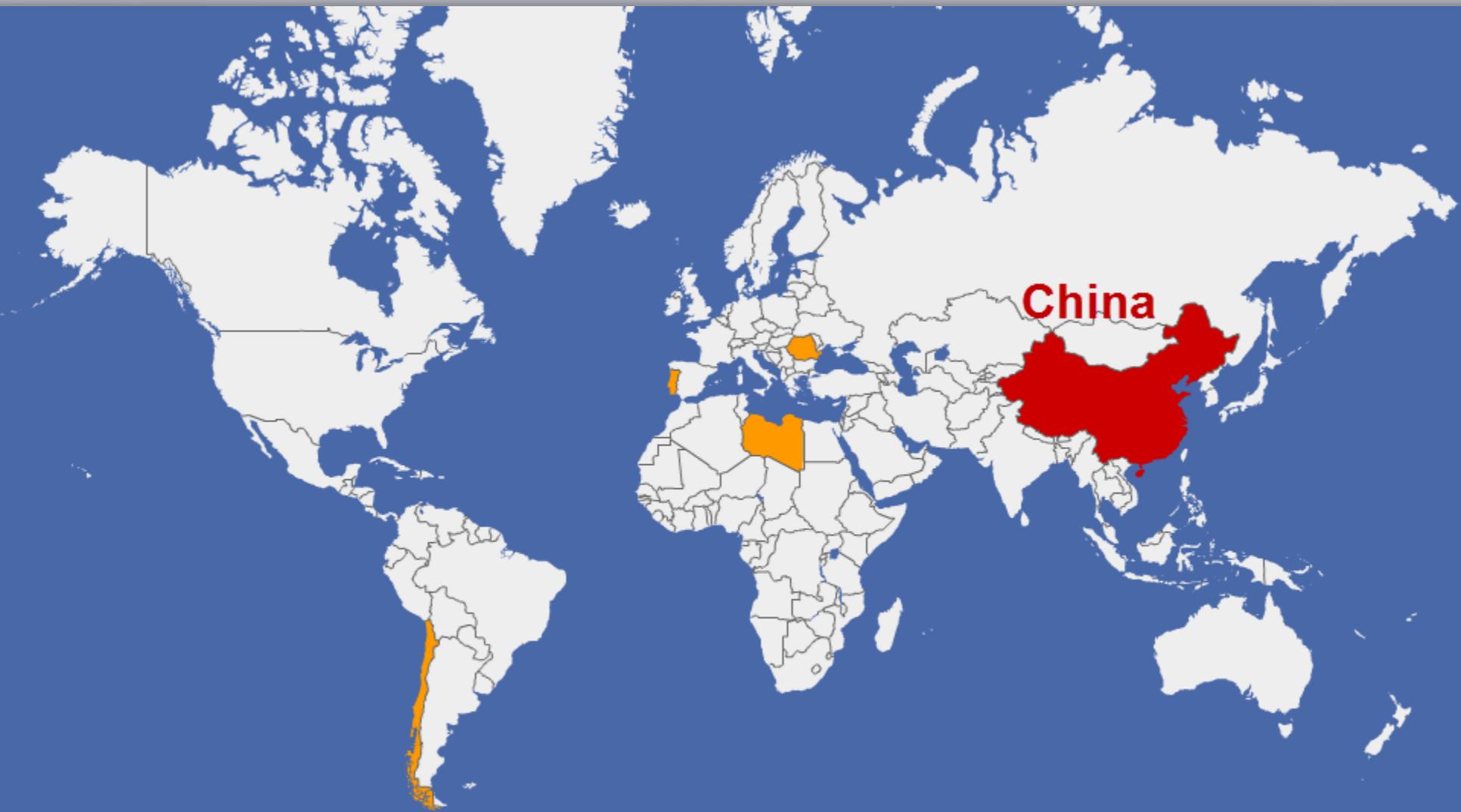
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Romania

Libya

Chile

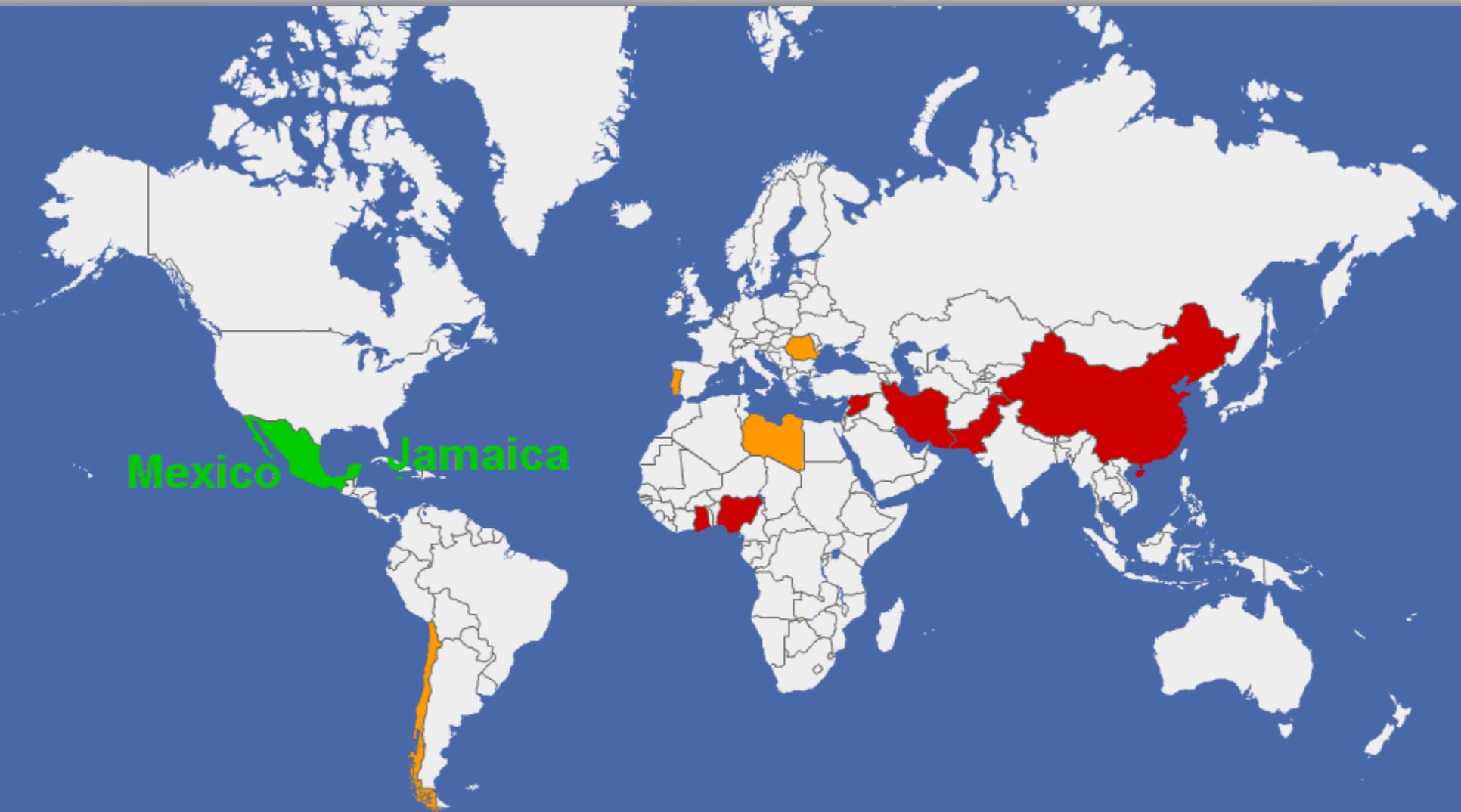
Core Conversion Work



Core Conversion Work



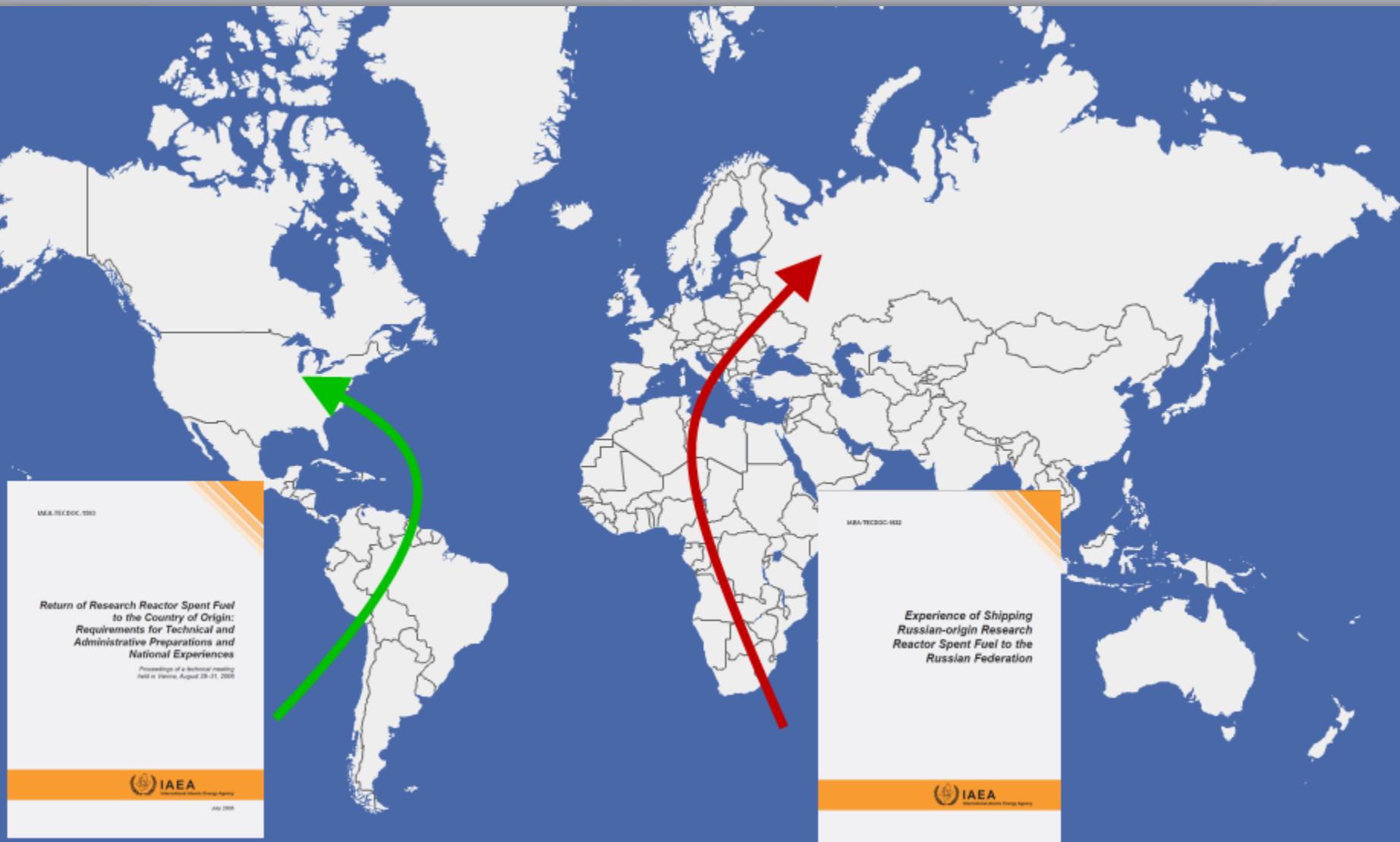
Core Conversion Work



Conversion of medical isotope production

Assisting developing MS in building small-scale non-HEU Mo-99 production capability and working with major producers of Mo-99 to assist in conversion from HEU targets to LEU targets, as well as changes to front-end processing and waste

Repatriation of fresh and spent nuclear fuel



RRRFR Fresh Fuel Shipments

- 2002 - 2010 under contracts arranged by the IAEA
- 21 shipments representing a total amount of 603.6 kg of fresh HEU fuel were returned to the Russian Federation

RRRFR Fresh Fuel Shipments

Fresh HEU RR Fuel Shipments

Country	Facility	U-mass [kg]	Completed
1 Serbia	RA , Vinca	48.0	2002-02-08
2 Romania	WWR-S Magurela	14.0	2003-09-30
3 Bulgaria	IRT-2000, Sofia	17.0	2003-12-23
4 Libya	IRT-1 Tajura	17.0	2004-03-07
5 Uzbekistan	WWR-SM Tashkent	3.0	2004-09-09
6 Czech Republic	LWR-15, Rez	6.0	2004-12-21
7 Latvia	IRT-M, Salaspils	3.0	2005-05-25
8 Czech Republic	Critical Assembly, CTU	14.0	2005-09-27
9 Libya	IRT-1 Tajura	3.0	2006-07-25
10 Poland	MARIA	39.8	2006-08-10
11 Czech Republic	Rez	0.2	2006-10-15
12 Germany	RRR	268.0	2006-12-18
13 Poland	MARIA	8.8	2007-08-28
14 Vietnam	Dalat	4.0	2007-09-17
15 Romania	Pitesti	30.0	2009-06-28
16 Hungary	BRR	18.6	2009-07-06
17 Czech Republic	Rez	12.1	2010-06-18
18 Belarus	Minsk. Sosny, Pamir mobile fuel	46.7	2010-11-29
19 Ukraine	Sevastopol	25.1	2010-12-29
20 Ukraine	KINR	9.8	2010-12-29
21 Ukraine	Kharkov 1st	15.7	2010-12-29
TOTAL		603.6 kg	

Last update: 2011-09-20



Conclusion

- IAEA works with Member States to tailor HEU minimization efforts to their specific needs
- The Agency can bring technical, techno-legal and techno-political expertise to bear on issues
- The Agency does not prescribe policy or projects; Member States must request assistance

Thank You for your attention!



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