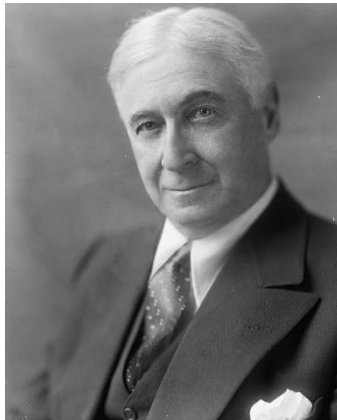


# “Recycling of Nuclear Wastes in Sustainable World”

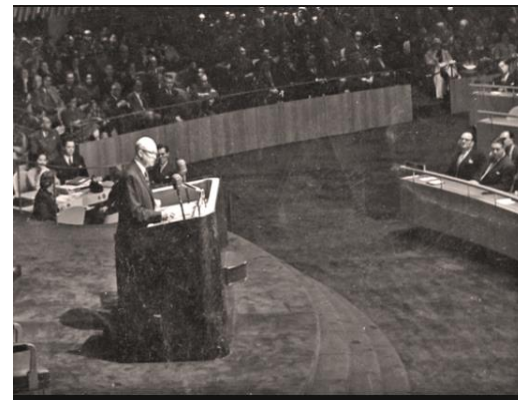
ATOMEXPO, Sochi, Russian Federation, April 15-16, 2019

Roundtable on “Responsible Approach to the Environment and Natural Resources”

Professor Il Soon Hwang, Academician ([hisline@unist.ac.kr](mailto:hisline@unist.ac.kr))  
Ulsan National Institute of Science and Technology and  
Nuclear Security Research Institute, Korea Nuclear Policy Society

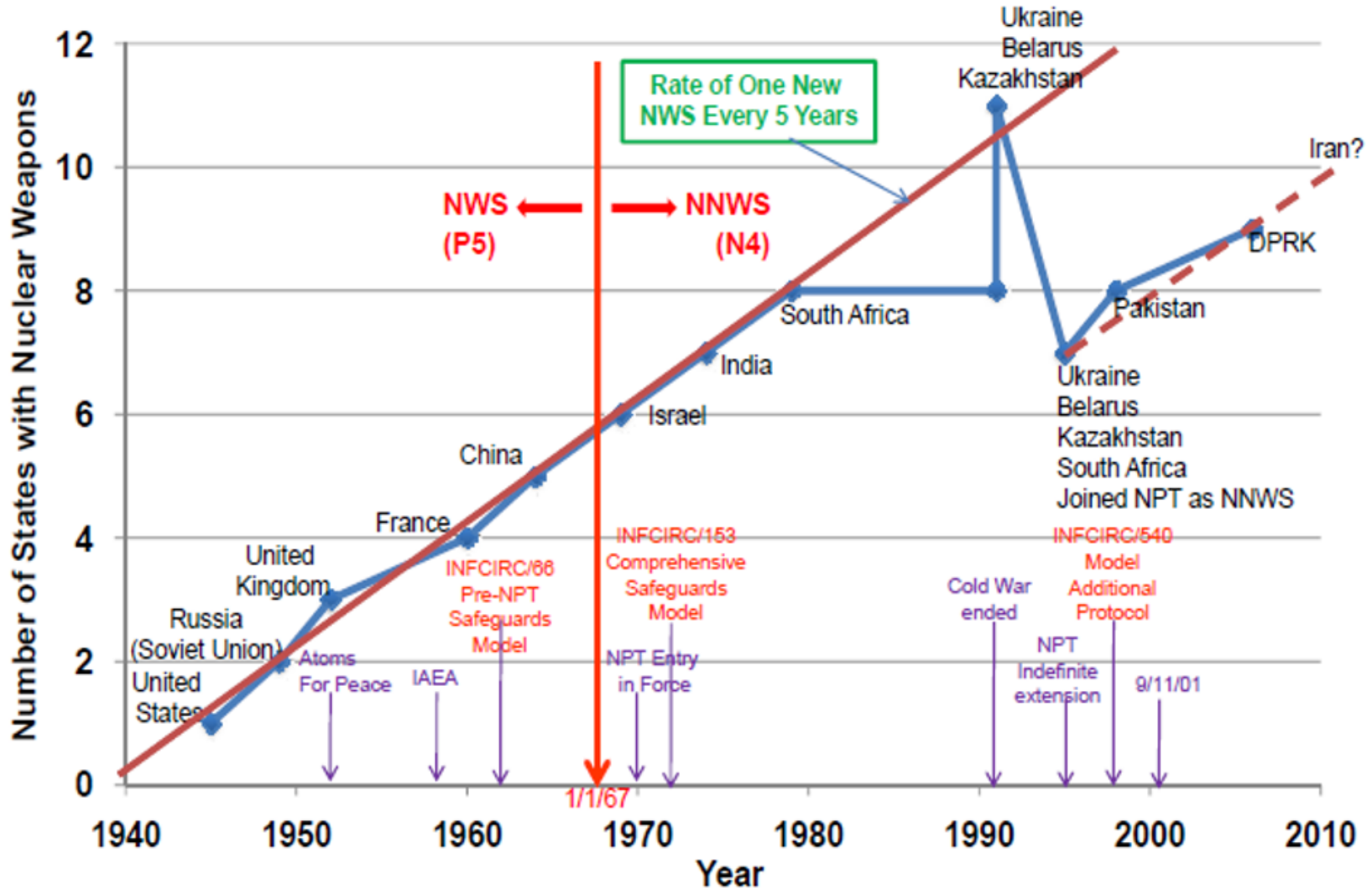


Baruch Plan  
(US June 1946)

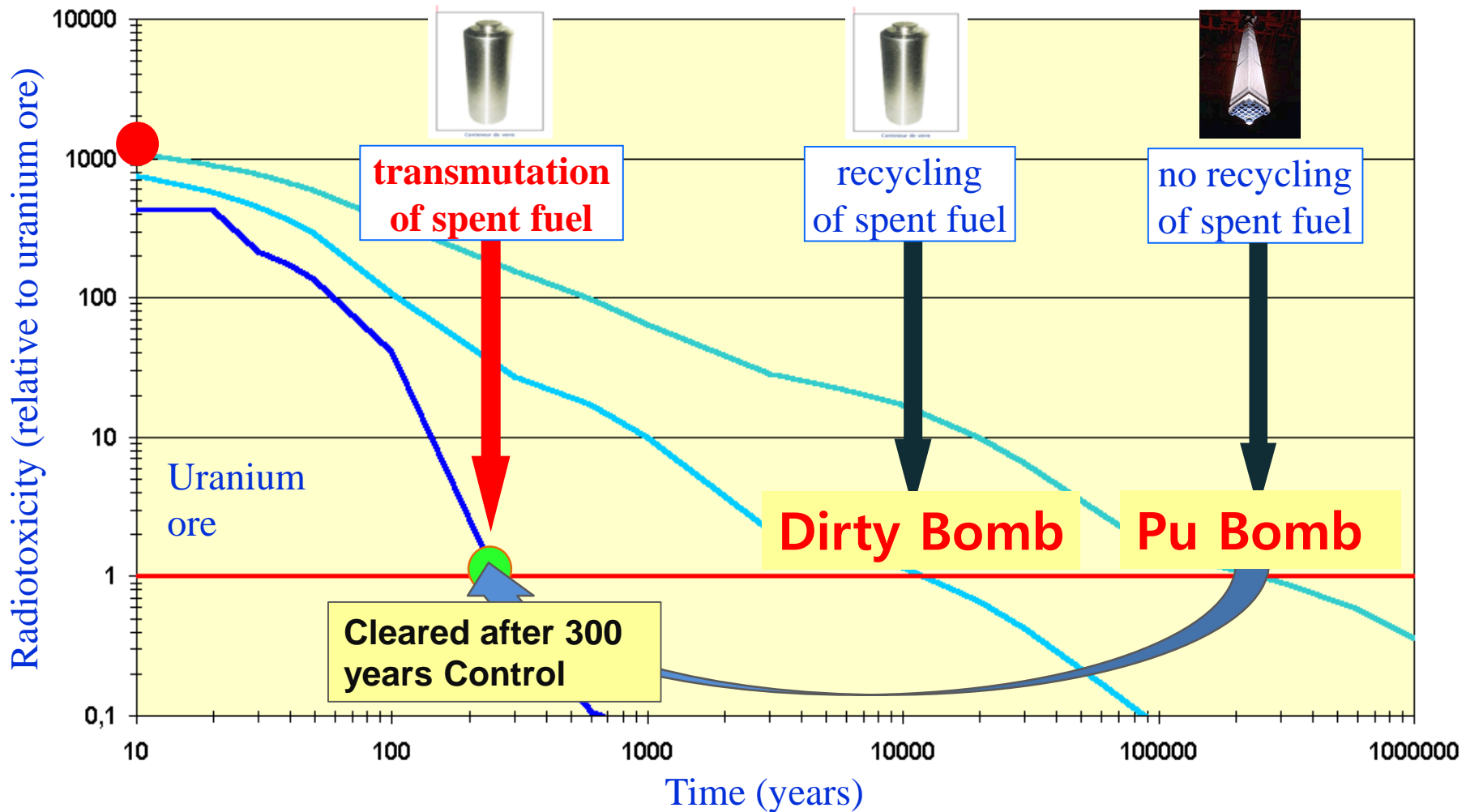


Eisenhower’s Atoms for Peace  
(US December 1953)

# Failure to Closing Nuclear Fuel Cycles

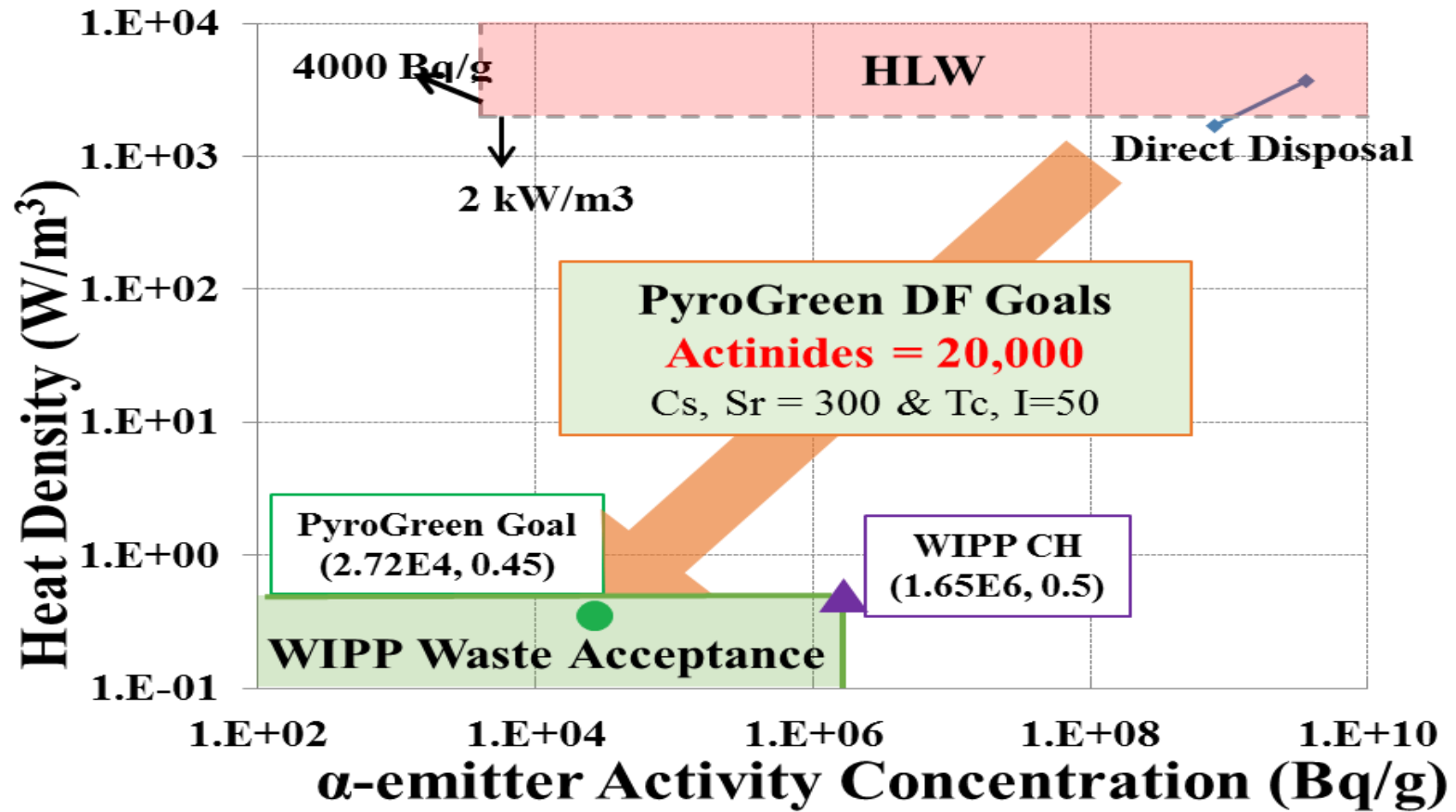


# In Densely-populated Countries, Direct-disposal will prove to be a Grave Mistake

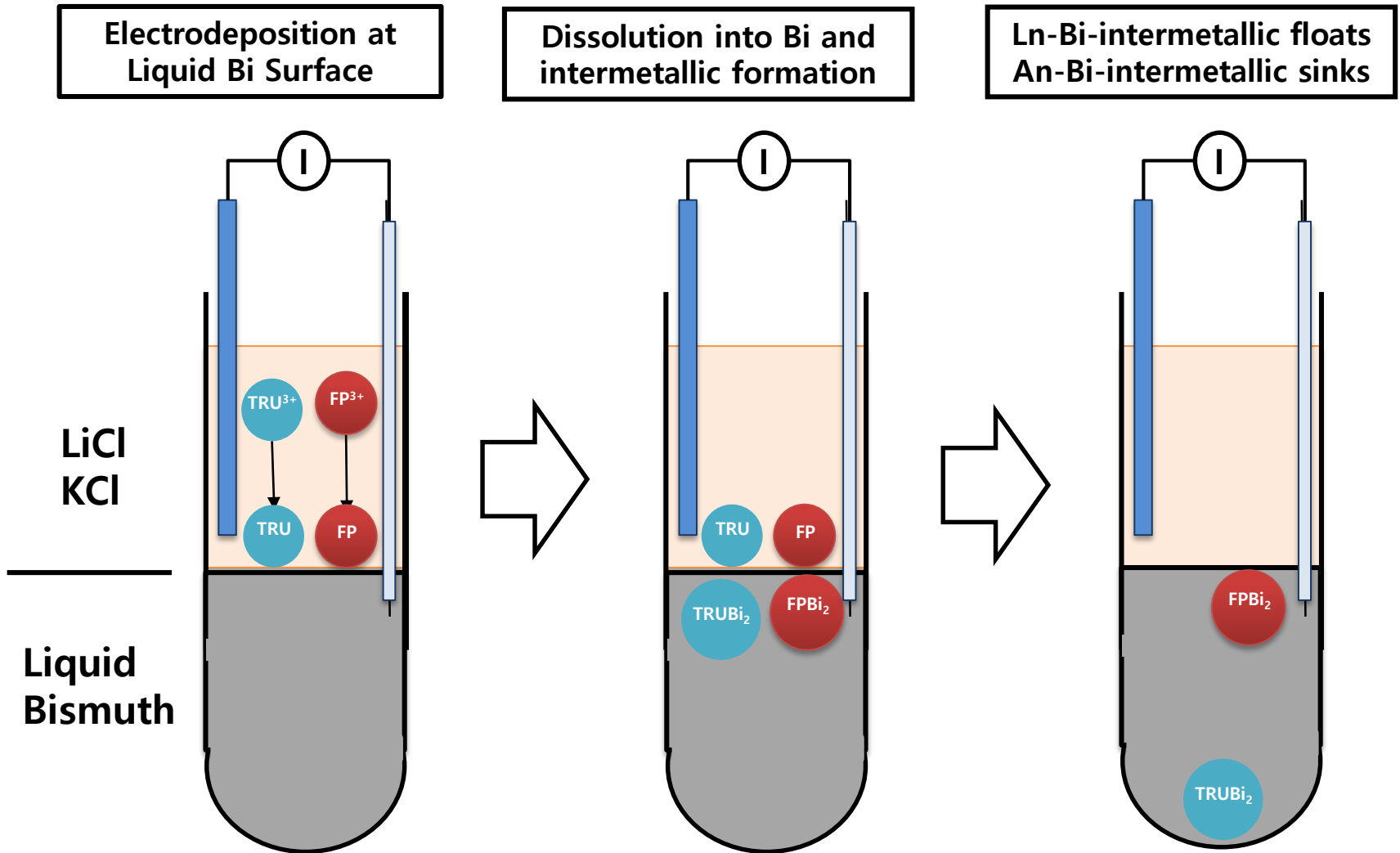


# Partitioning Goal for Eliminating HLW

**TRU Decontamination Factor for Vitrified Final Wastes (~1,000 for PUREX)**



# PyroGreen can achieve DF of 20,000 to Eliminate HLW



# Multi-National Approaches to Back-end Fuel Cycle

Int. Proj. on Innov. Rx & F. Cyc. (INPRO)  
Multi-National Approach (MNA)

Gen-IV International Forum (GIF)  
Global Nuclear Energy Partnership



The existence of thousands of nuclear weapons is the most dangerous legacy of the Cold War. Today the Cold War has disappeared but thousands of those weapons have not.



disposal or processing. Not all countries have appropriate geological conditions, and a cost of such operation for many states with small nuclear programs is excessively high. In this respect, I have started to support multi-national proposals as to



LEU Fuel Bank (2003)

Adamov (Kiriyyenko)  
Spent Nuclear Fuel  
Take-Back Service  
(2001)



MYRRHA for MN  
Transmutation of SNF  
(2010)

Magwood (Poneman)  
"CRADLE-TO-GRAVE"  
(2010)

**How to launch "Multi-National SNF Recycling to Eliminate HLW?"**