# Asia Should Pursue Multi-National Approach to Back-end Fuel Cycle for Peace

#### **Professor II Soon Hwang**

School of Energy Systems Engineering Seoul National University, Seoul, Korea <u>hisline@snu.ac.kr</u>

2012 International Forum on Nuclear Energy, Nuclear Non-Proliferation and Nuclear Security JAEA & University of Tokyo, Japan December 12-13, 2012

# **Nuclear Power Construction 2012**



gure 4: Sixty-three nuclear power reactors are under construction. The majority are in China, India and the Russian Federation. Source: Adapted from IAEA (2012) Prof. I.S. Hwang, SNU

# **Peaceful Nuclear Power for ASIA**



# Proliferation Curse Moving to Asia



Wolfgang K.H. Panofsky (APS, 2007) Prof. I.S. Hwang, SNU 4

## **Back-end Fuel Cycle and Proliferation**

Comparison of Proliferation Resistance Measure in Recycle and Once-through (US BRP 2004)



Figure 2·–·Potential Impact of Improved Safeguards

### **Advanced Back-end Fuel Cycle Technology**



Prof. I.S. Hwang, SNU

### **Potential MNA to the Back-end Fuel Cycle**

Potential MNA to the Back-end Fuel Cycle



### Multi-National Approach to Stop the Cold War

- Nuclear Power is moving to Asia despite Fukushima for economical growth!
- > Nonproliferation by air-tight safeguards
- Safety through serious cross-examination
- Security through nuclear energy alliance
- Economy by eliminating HLW & by up-scaling service

### It is proposed to launch an Asia-Pacific Task Force to assess viability of Asian MNA