



**CITS**

CENTER FOR INTERNATIONAL TRADE & SECURITY

**THE UNIVERSITY OF GEORGIA**

# **Threats to Nuclear Power Infrastructure and the Role of the General Public in Countering Them**

**Dr. Igor Khripunov**

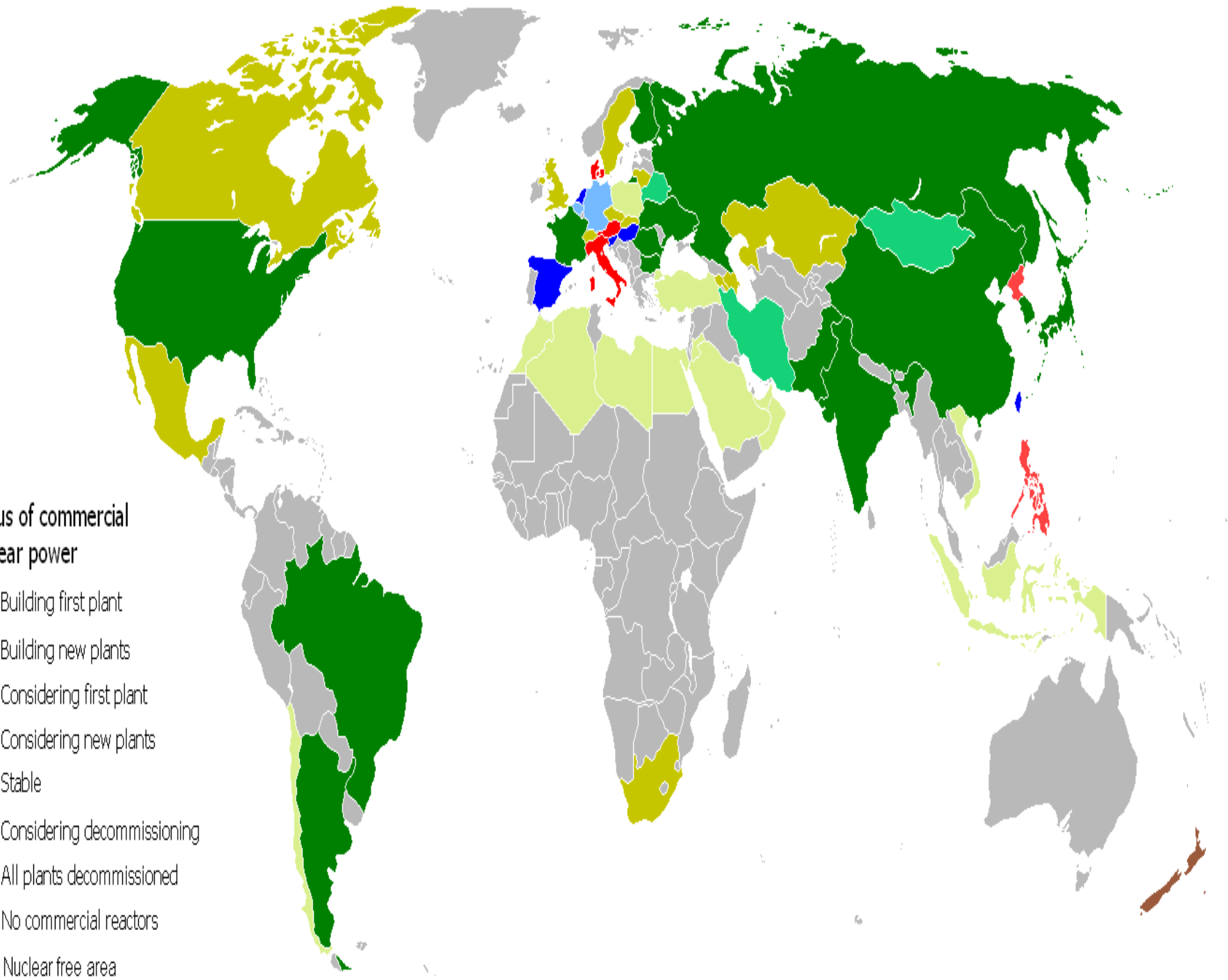
**[i.khripunov@cits.uga.edu](mailto:i.khripunov@cits.uga.edu)**

**The IAEA Symposium on Nuclear Security**

**Vienna, Austria, 30 March – 3 April, 2009**

Status of commercial nuclear power

- Building first plant
- Building new plants
- Considering first plant
- Considering new plants
- Stable
- Considering decommissioning
- All plants decommissioned
- No commercial reactors
- Nuclear free area





# Nuclear Power Infrastructure as a Target

---

- **Nuclear power infrastructure has additional value as targets for theft, sabotage, unauthorized access, or other malicious acts given their radiological and chemical content and potential for building weapons.**
- **The International Convention for the Suppression of Acts of Nuclear Terrorism, which came into force in July 2007, provides a solid international legal basis for the public to have a stake in this aspect of nuclear security.**

**“Any person commits an offense within the meaning of this Convention if that person unlawfully and intentionally:**

**(B) ... uses or damages a nuclear facility in a manner which releases or risks the release of radioactive material:**

**(i) With the intent to cause death or serious bodily injury; or**

**(ii) With the intent to cause substantial damage to property or the environment...”**



# Nuclear Power Infrastructure as a Target

---

- Among the goals of the Global Initiative to Combat Nuclear Terrorism (GICNT) launched by the United States and Russia in 2006 and joined by over 75 countries since its inception is to “integrate the collective capabilities and resources to strengthen the overall global architecture to combat nuclear terrorism”
- One of the Global Initiative principles to be implemented on a voluntary basis is to “enhance security of civilian nuclear facilities.”
- Realizing that the success of such activities and efforts would require the involvement of all major stakeholders, GICNT has issued several statements inviting the participation of private industry, the nongovernmental and academic communities, and the public.

# The General Public as a Unique and Heterogeneous Stakeholder

---



- **The general public (or civic society) embraces a diversity of spaces, actors and institutional forms, varying in their degree of formality, autonomy and power.**
- **The general public is split regarding the acceptability and value of nuclear power generation (59% in the United States somewhat or strongly favor the use of nuclear energy, while 37% are opposed – March 2009) but enjoy consensus in their rejection of nuclear terrorism, which by definition includes malicious interference in the operation of nuclear power infrastructure.**
- **A more empowered and awakened citizenry can contribute to an effective campaign against nuclear terrorism. The public must no longer be looked upon as potential attack victims or panicked masses but rather as a vital contributing factor for better nuclear security throughout all stages of a possible incident.**



# What Can the Public Contribute?

---

- **Nongovernmental and academic communities are in a position to offer their independent and unbiased expertise to help focus government and industry efforts on the pressing issues of screening nuclear facilities, material and managing the risk of nuclear terrorism. They can devise innovative solutions, enjoy the trust of the public at large, and exert influence on public opinion.**
- **Religious organizations are on high moral ground to condemn nuclear terrorism and enable local communities to succeed in resilience-building as well as reducing the immediate and long-term physical and psychological impact of a terrorist incident.**



# What can the Public Contribute?

---

- **Grass-roots movements can lobby for their countries effective participation in relevant international agreements and arrangements like GICNT, advocate speedy ratification of international instruments by national parliaments and develop proactive approaches while deliberating proposed government policies.**
- **The independent media plays a vital role in keeping the public informed and has the responsibility to communicate to it accurate, reliable, and verifiable information. Due to terrorists' dependence on the media to influence a population, the media has to perform a careful balancing act between commercial interests and living up to expectations of good corporate citizenship.**
- **Other elements of civic societies with often overlapping and conflicting agendas includes professional associations, social movements, women's organizations, trade unions, self-help groups and others.**



# Common Risk Perception

---

- **Common risk perception is a prerequisite for cooperation among all stakeholders and is built upon objective and transparent risk communication, which means an interactive process of exchange of information and opinion among individuals, groups, and institutions and the transfer of risk information to the public, and the transfer of information from the public to decision makers and infrastructure operators.**
- **A common level of acceptance of risk is based not only on technical expert judgment, but it is strongly affected by cultural and individual aspects and values.**



# Common Risk Perception

---

- **For professionals, risk is the likelihood of an event, multiplied by its estimated consequences, ranging from mild to catastrophic (risk = probability x consequences). This approach, however, is often misunderstood and rejected by laypersons who are guided by different perceptions and values.**
- **For most of the public, perception of risk prior and during the event is based on such factors as:**
  - **Attitudes toward the peaceful use of the atom**
  - **Proximity to the radiation release**
  - **Perceived magnitude of the consequences**
  - **Ignorance of the nature of the hazard**
  - **The degree of physical harm dealt to oneself or fellow citizens**
  - **Exposure to grotesque scene of injury or death**
  - **Suddenness of the event**
  - **Distrust of the institution attempting to manage the hazards**



# **Fear-Mongering is Counterproductive**

---

**The human fear is not reasonable but is driven by fragmented and conflicting information, hype, miscommunication, and uncertainty. If we are unable to convert our uncertainty into a reasoned assessment of risk, we grow more and more afraid, caught up in a cycle of worry.**

**Marc Siegal  
“False Alarm,” 2005**



# Risk Communication

---

- Risk communication is vital in the process of achieving a common risk perception as well as building up public trust and resilience in times of crisis.
- A mode of risk communication may be regarded as successful to the extent that it raises the level of understanding of relevant issues or actions for all stakeholders and ensures that they are adequately informed and can play, if necessary, a meaningful risk management role.
- In order to achieve desired objectives any communication with the public ideally must proceed through the following stages:
  - **Public information sharing**
  - **Public outreach**
  - **Public involvement**



# Risk Communication

---

- **By getting the public on board and recognizing it as an important stakeholder, a meaningful risk communication strategy can pursue several distinct objectives:**
  - **Encourage a well-informed and motivated public to contribute to a healthy nuclear security culture, not only at the nuclear power plant or other associated unit level but also nationally**
  - **Build up public vigilance, persuading citizens to cooperate more closely with law enforcement**
  - **Integrate acts of nuclear terrorism into the general scheme of all-hazards approach because placing radiation and the fears associated with it on the same level as dangers that are equally life threatening but more easily intelligible would be able to allay those fears.**
  - **Create a more resilient and prepared population in the face of terrorist adversaries because resilient citizenry will be more than bystanders in the effort to deal with terrorist acts and will be less prone to fear and anxiety**
  - **Maintain effective lines of communication with victims' groups that are now increasingly formed in the aftermath of major disasters and incidents.**



# From National Tier to International Coordination

---

- **More effective efforts of the public as a stakeholder in nuclear security at the national level would require an informal arrangement at the international level for better coordination and information sharing with a focus on the role of civic society in dealing with this and other types of nuclear terrorism.**
- **In response to these needs, the Center for International Trade and Security at the University of Georgia is exploring the possibility of launching a Track II program in support of the Global Initiative to Combat Nuclear Terrorism and other related government-led efforts.**
- **To be known as the Public Partnership for Securing the Atom (PPSA), this program will reach out to select national stakeholders among the public particularly in the so called “nuclear newcomer” states and work closely with international organizations such as the International Atomic Energy Agency (IAEA), World Institute of Nuclear Security (WINS), the World Nuclear Association (WNA), and others.**