



Summarizing GLOBAL 2005

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Technical Program Chair, GLOBAL 2005

Number of the papers submitted to Global Series

Year	Place	Papers
1993	Seattle	203
1995	Versailles	270
1997	Yokohama	294
1999	Jackson Hole	433
2001	Paris	330
2003	New Orleans	373
2005	Tsukuba	$466 + \alpha$

Papers submitted to 15 topics

Topics	Papers
Global prospect of energy, resource and environment	7
Current status and strategy for nuclear systems	6
Sustainability and optimization of nuclear systems	26
Advanced reactors	79
Advanced fuels and materials	56
Advanced reprocessing	79
Partitioning and transmutation	43
Advancement and optimization in waste and spent fuel management	73
Expanded utilization of nuclear systems	14
Novel energy systems including accelerator driven systems	22
Enhancement of proliferation resistance and non-proliferation	24
Innovative safety approach for nuclear fuel cycle	9
Latest status of ongoing fuel cycle optimization study	9
World common social issues	9
International collaboration on research and development resources in future	10

Plenary sessions gave us valuable information necessary for understanding GLOBAL subjects

Plenary-I	Dr. J. Grossenbacher, Dr. B. R. Barre, Dr. S. Kondo, Mr. Y. Sokolov, and Dr. M. Xu Chaired by Dr. H. McFarlane
Plenary-II	Dr. Matsuhashi, Dr. A. Noda, and Dr. B. Frois Chaired by Dr. S. Tanaka
Plenary panel-I	Proliferation prevention in the next nuclear era -Learning from the past and preparing for the future, moderator Dr. Mel Buckner and Mr. Tom Sanders
Plenary panel-II	Prospect on the projected quantities of nuclear systems in the future Chaired by Dr. K. Uematsu and Dr. J Bouchard

Invited and contributed papers showed much up-to-date technical information in various research fields

Advanced reactors

Advanced fuels and materials

Advanced reprocessing

Partitioning and transmutation

Optimization in waste and spent fuel management

Expanded utilization of nuclear systems

Novel energy systems including accelerator driven systems

Proliferation resistance and non-proliferation

Safety approach for nuclear fuel cycle

Ongoing fuel cycle optimization study

Publishing selected papers in a journal

- ✓ Technical Program Committee wants to select 35 excellent papers to publish them in the special issue of

Journal of Nuclear Science and Technology, which is the Journal of Atomic Energy Society of Japan

on condition of authors' agreements.

Past Trend of the GLOBAL Series

By Dr. A. Walter

1993, Seattle

- ✓ Future of Transmutation for Clean Nuclear Power
- ✓ Weapons Disposition Options

1995, Versailles

- ✓ Reprocessing as “Hot” Topic
- ✓ Management of Weapons-Pu
- ✓ Advanced Concepts for Pu Utilization
- ✓ New Transmutation Thrusts
- ✓ Importance of Public Acceptance

1997, Yokohama

- ✓ Effective Methods of Pu Burning in LWRs
- ✓ Vision of Nuclear Energy Utilization in Developing Asia
- ✓ International Collaboration for the Promotion of Radioactive Waste Management
- ✓ Innovative Fuel Cycle Technologies for 2nd Nuclear Era

Past Trend of the GLOBAL Series

By Dr. A. Walter

1999, Jackson Hole

- ✓ Nuclear Profession to speak with one-voice on the merits of nuclear
- ✓ Two Principal Time Frames
 - 1) Near-Term: Led by Industry
 - 2) Long -Term: Led by R&D Community

2001, Paris

- ✓ Broad International Perspectives on the Future of Nuclear Energy
- ✓ Energy Needs & Sustained Development
- ✓ Nuclear Waste Management

2003, New Orleans

- ✓ Generation-IV reactor development roadmap released; R&D initiated
- ✓ Advanced Fuel Cycle Initiative now a major program in the US.

GLOBAL 2005 at Tsukuba

Nuclear Systems for the Future Generation and Global Sustainability

Addressing the circumstances :

- ✓ Start of the second decade of GLOBAL
- ✓ Recent development of climate change, fossil fuel price rise, and energy demand increase
- ✓ Worldwide need to reduce CO_2 using nuclear energy
- ✓ Progress in GEN-IV, INPRO, AFCI and other R&Ds
- ✓ Growing necessity of non-proliferation discussion
 - >>> Epoch of Nobel Prize
- ✓ Growing Asian nuclear activities, Japan, China, Korea and India
- ✓ Growing interests for hydrogen production by nuclear energy

GLOBAL 2005 at Tsukuba

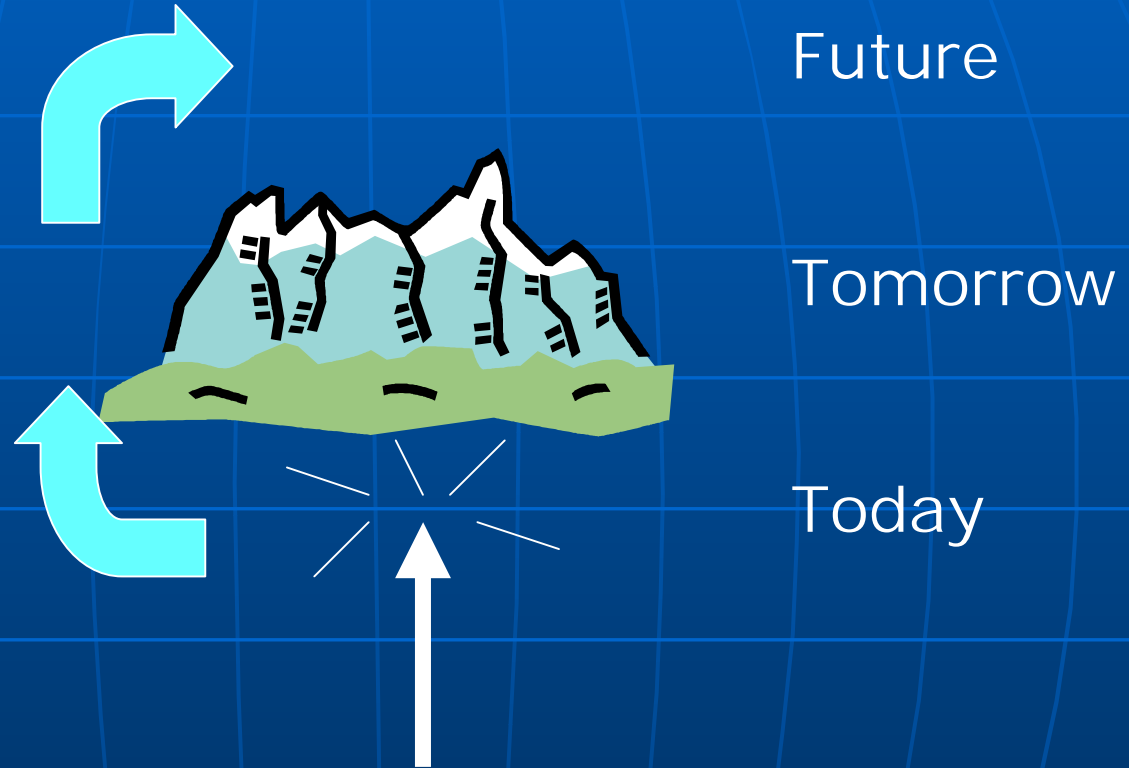
Nuclear Systems for the Future Generation and Global Sustainability

Common views were obtained on

- ✓ Current status of Nuclear Systems over the world
- ✓ Current status and future strategies of each country
- ✓ Significance of nuclear systems for the global sustainability
- ✓ Growing importance of nuclear systems in the future
- ✓ Necessity of continuing discussion on non-proliferation issues
- ✓ Various progress in specific fields of Reactor, Reprocessing, Fuel, Waste, Innovative Nuclear Utilization, and so on
- ✓ Significance of getting public acceptance through communication
- ✓ Importance of next generation of nuclear workers and professionals



- ✓ Important to continue to share the information among different countries



GLOBAL Conference ?

GLOBAL 2005 at Tsukuba

Nuclear Systems for the Future Generation and Global Sustainability

We are walking
with the same ultimate goal
with different approaches
under different circumstances - - - -



Let's continue to exchange information about Nuclear Fuel
Cycle Systems for the future
at GLOBAL 2007

**To Authors, Participants, Invited lecturers
and Panelists, Session Chairs, and all the
staffs, we'd like to extend our sincere
gratitude for their support.**

Technical Program Committee, GLOBAL 2005

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GLOBAL 2005.

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On behalf of the Technical Program Committee,
GLOBAL 2005, I would like to

Thank you, again

and

Look forward to

GLOBAL 2007