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PARALLEL SESSION

Systemic Approach to Safety

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The History of Nuclear Accident



Human Error
INPO

Human Error+ Design Deficit
WANO
Organizational and Safety
Culture

Natural Disaster
Systemic Approach

If 4th accident? Management Failure to Accident
(Safety Culture, Supply Chain Management, Management Policies...)

How to solve this issues?

The answer is Systemic Approach (Models, Tools, and Methodologies



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A number of tools and methodologies for systemic approach are being developed from IAEA and Academics

Screening Methodology developed and applied by IAEA for the interaction of human, technology and organization are being applied to many countries

STAMP (System Theoretically Accident Model and Process) are also developed and applied to evaluation of safety culture in academics

MAP project in Finland are being developed for the purpose of project management of large scale construction project using systemic approach



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The strength in depth philosophy based model are also being developed in academics for the developing the institutional lesson rather than technical lessons.

From the regulatory side, various activities to incorporate the systemic approach to regulation are being developed, specially in Sweden, Swiss and Austrailia. This approach aims to have an integrated systematic view of safety in regulatory agency which is more effective for radiation safety affected the relationship between human, technology and organization



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Story telling methodology is also being paid a good attention for the way of enhancing communication with public

Management policies as a part of organizational factors have a significant impact of safety of nuclear power plant. To understand the structure of this dynamics, system dynamics modeling approach are also being applied, especially in Korea



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To accomplish the goal of safety culture, a systemic approach is necessary because of the complexity.

If the systemic methodology being applied in IAEA is complemented by other tools told here, specially system thinking methodology, It will be very effective to provide more valuable insights to both regulator and operator together, even to public



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Thank you for your attention !