

IAEA General Conference 2019

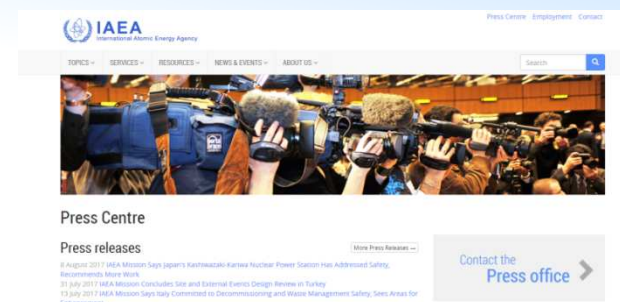
Side event of the
Fast Nuclear Emergency Tools (FASTNET) project
- 18 September 2019 -

Department of Nuclear Safety and Security
Incident and Emergency Centre

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IAEA Roles and responsibilities in Response

- Notification and information exchange
- Provision of public information
- Assessment of potential emergency consequences and prognosis of possible emergency progression (A&P)
- Provision of assistance on request
- Coordination of inter-agency response



Latest A&P activities

April 2019: Technical Meeting on Advances in EP&R Technology and Arrangements

- Two conclusions from the TM report:
 1. “The importance of having pre-calculated source terms as a tool for considering accident scenarios during the preparedness phase and examining the postulated consequences was discussed during the meeting. The FASTNET project and its collection of source terms was seen as a very useful tool for this purpose.”

Latest A&P activities



April 2019: Technical Meeting on Advances in EP&R Technology and Arrangements

- Two conclusions from the TM report:
 2. “The use of the FASTNET database as a tool for supporting preparedness phase activities and for assisting in running realistic exercises was noted by the participants. The assessment and prognosis tool website of the IAEA was seen as the most accessible location to host and make available a database of source terms provided by any Member State volunteering to contribute such data (and will also include the FASTNET database source terms as starting point).”

Latest A&P activities

July 2019: Consultancy meeting to discuss the implementing of the IAEA assessment and prognosis process in case of a nuclear or radiological emergency

- Drafting of a **prognosis methodology** to develop further the prognosis approach implemented in the IAEA tools for the response to emergencies at **NPPs**.
- One key question addressed in the prog. is “**How much?**”
 - Direct reference to source term (ST):
 - Nuclides released
 - Amount released
 - Kinetics of the release
 - Preliminary step before planning response actions in the field

Latest A&P activities

August 2019: Consultancy Meeting to discuss an Assessment and Prognosis Methodology in case of an Emergency at a Spent Fuel Pool

- Adaptation of the approach used for A&P in the event of a nucl. emergency at a NPP to a nucl. or rad. emergency at a Spent Fuel Pool (SFP).
- Participants also considered the draft prognosis methodology which had been prepared over the course of the previous CS and agreed that the same core of questions can apply to SFP (among them, “How much?”)

Construction of a ST database: What for?



For the Member States, a source term and accident database can help meet GSR Part 7 requirements

- Requirement 4: Hazard assessment
- Requirement 5: Protection strategy for a nuclear or radiological emergency
- Requirement 7: Identifying and notifying a nuclear or radiological emergency
- Requirement 8: Taking mitigatory actions
- Requirement 9: Taking urgent protective actions and other response actions

IAEA Safety Standards

for protecting people and the environment

Preparedness and Response for a Nuclear or Radiological Emergency

Jointly sponsored by the
FAO, IAEA, ICAO, ILO, IMO, INTERPOL,
OECD/NEA, PAHO, CTBTO, UNEP, OCHA, WHO, WMO



General Safety Requirements

No. GSR Part 7



Construction of a ST database: What for?



However, attention should be brought to:

1. A ST database capability should be supplemented by expert judgement and adequate training.

Requirement 25 (Training, drills and exercises for emergency preparedness and response)

2. The decision-making process for protecting the public and the environment should not solely rely on ST estimation (and dispersion calculation capabilities).

Requirement 9 also highlights the need for monitoring and assessment of the radiological situation.

IAEA Safety Standards for protecting people and the environment

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General Safety Requirements No. GSR Part 7



Construction of a ST database: What for?



For the IAEA, a source term and accident database built on MSs' contributions will support the implementation of the A&P role

IAEA Action Plan on Nuclear Safety:

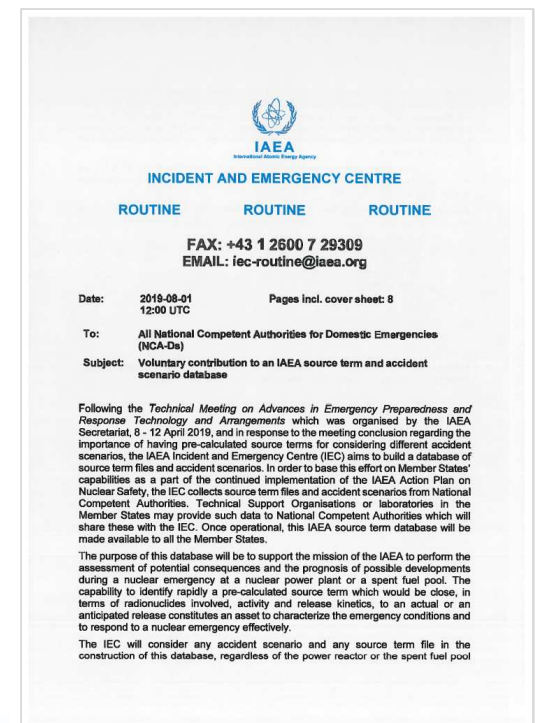
“The IAEA Secretariat to provide Member States, international organizations and the general public with timely, clear, factually correct, objective and easily understandable information during a nuclear emergency on its potential consequences, including analysis of available information and prognosis of possible scenarios based on evidence, scientific knowledge and the capabilities of Member States”

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Construction of a ST database: How?



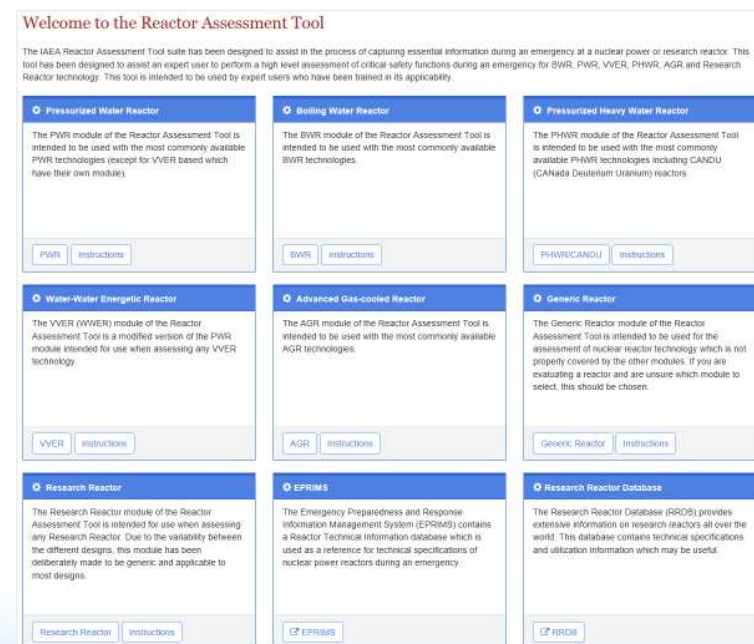
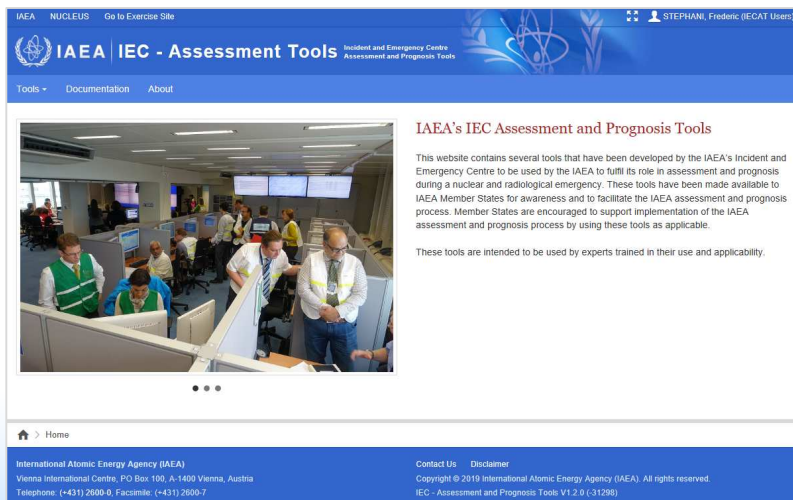
- The IEC will consider any accident scenario and any source term provided by counterparts in Member States, regardless of the power reactor or the spent fuel pool designs, the type of accident and the accident kinetics
- Communication sent in that sense to all NCA-Ds for sharing files with the IEC on a voluntary basis
(deadline: 15 February 2020)



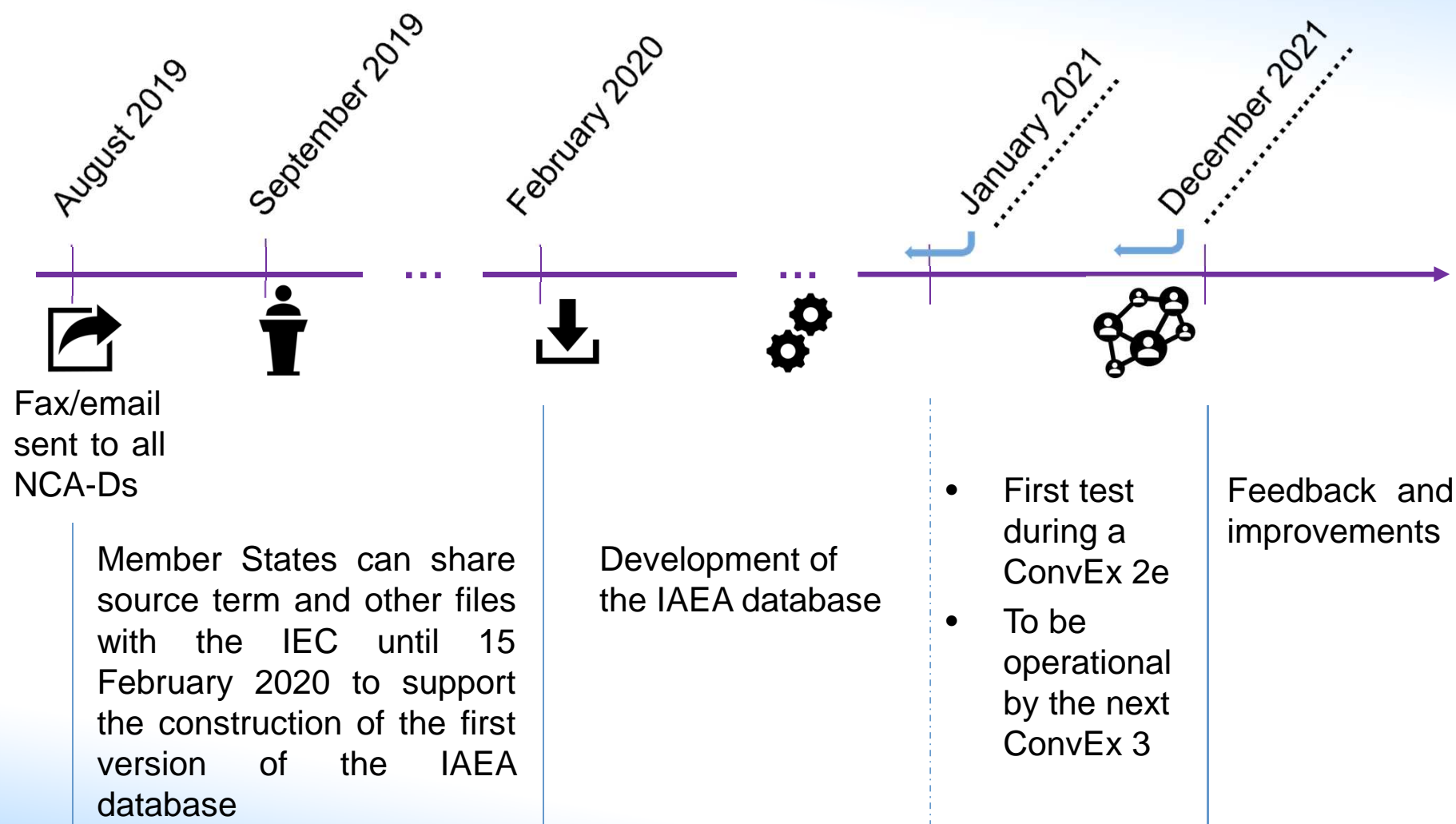
Construction of a ST database: How?



- Based on the collection of ST and other relevant files received from the MSs, the IEC will select a reasonable number of ST to be shared on its assessment tools website (likely in the Reactor Assessment Tool)
- The FASTNET database will be the first contribution to this collection



Construction of a ST database: When?





IAEA

International Atomic Energy Agency

Thank you!