

Training Course on the IAEA Safety Standards Overview

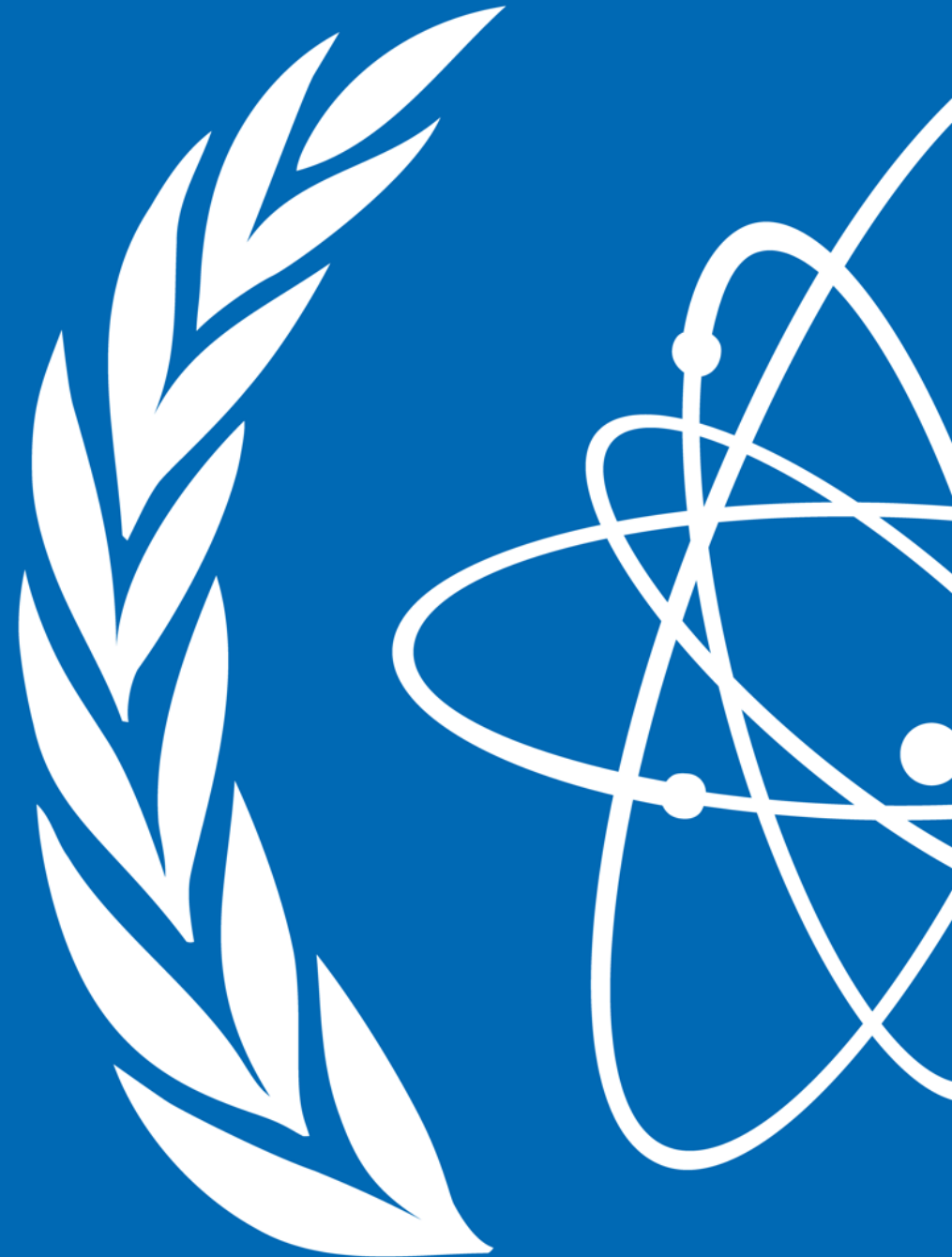
Introduction to GSG-11, Arrangements for the Termination of a Nuclear or Radiological Emergency

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Introductory question:

Does the end of the emergency response phase mean the end of the emergency?

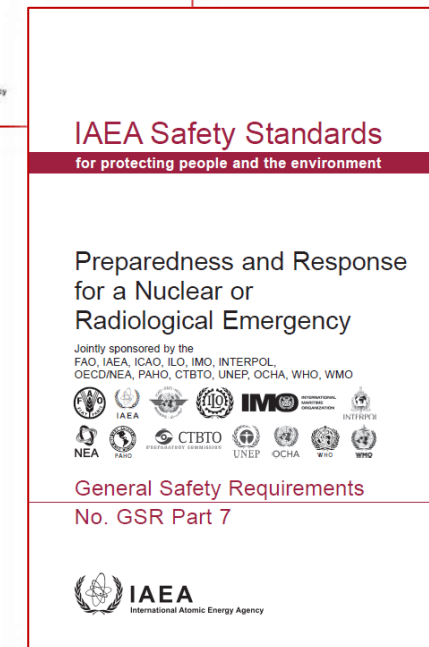
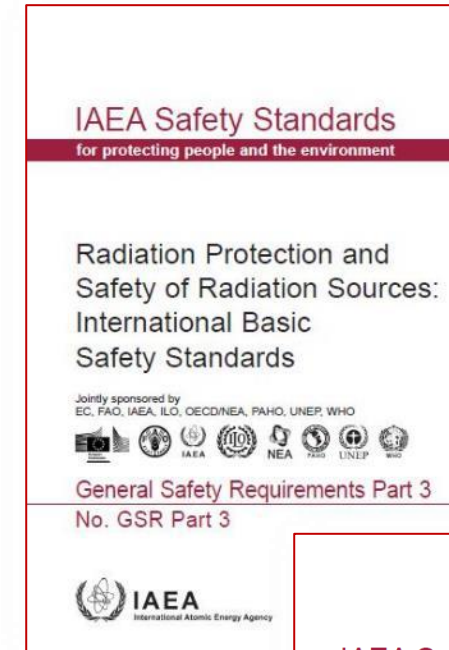
Requirements

- Requirement 46 in **GSR Part 3**:

The government shall ensure that arrangements are in place and are implemented as appropriate for the **transition** from an emergency exposure situation to an existing exposure situation.

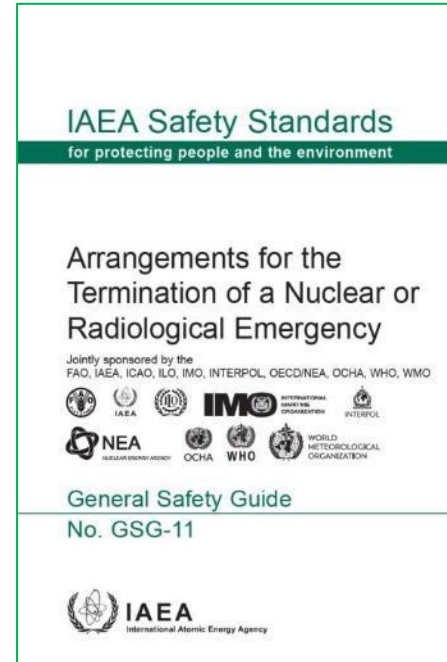
- Requirement 18 in **GSR Part 7**:

The government shall ensure that arrangements are in place and are implemented for the **termination of a nuclear or radiological emergency**, with account taken of the need for the resumption of social and economic activity.

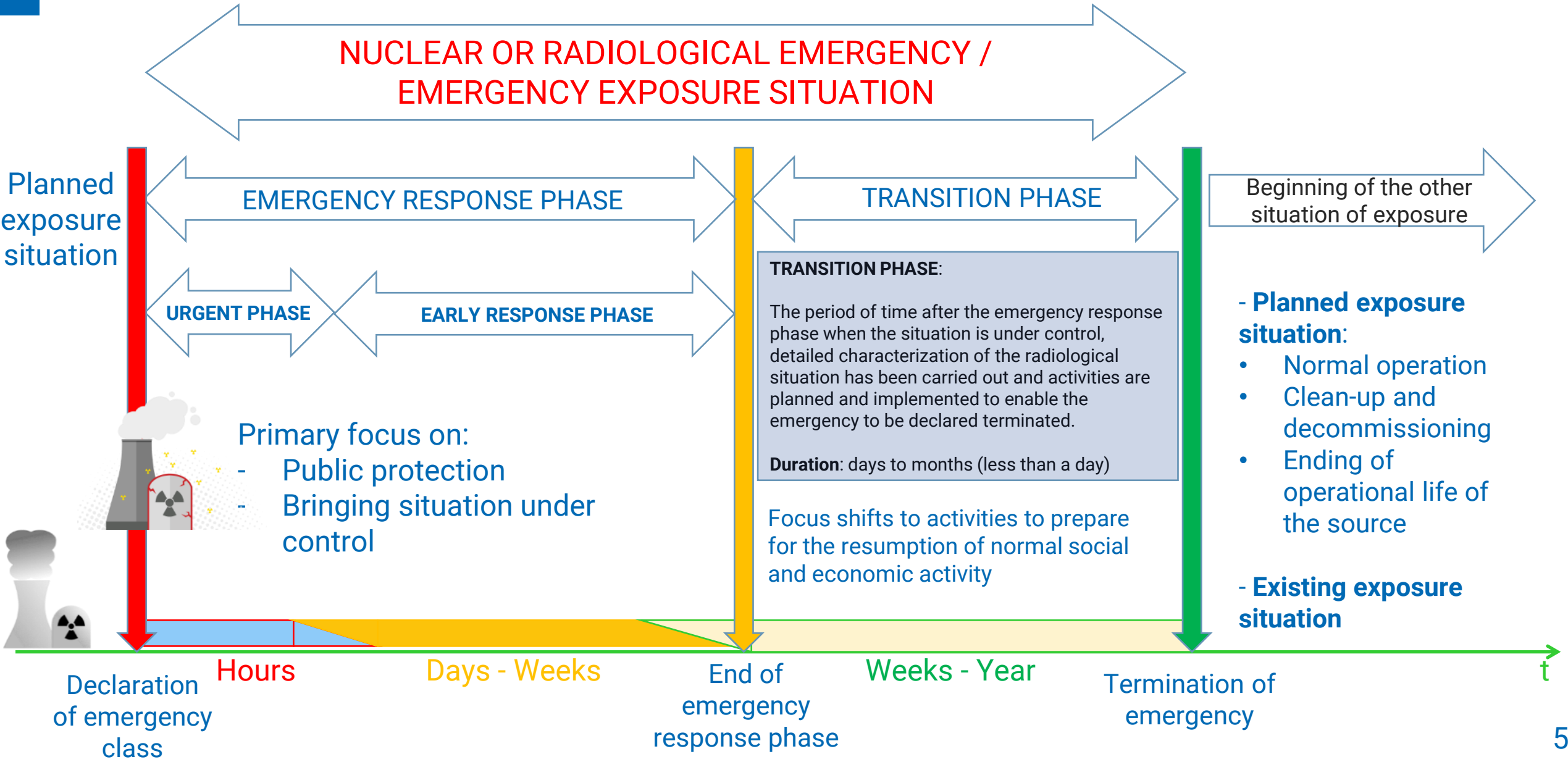


Recommendations, GSG-11

- Provides guidance and recommendations on:
 - Developing arrangements, as part of overall emergency preparedness efforts, for transition to either an existing exposure situation or a planned exposure situation, as appropriate, and for the termination of the emergency
 - The primary objective and prerequisites for enabling the emergency to be terminated
- Applies to any nuclear or radiological emergency irrespective of its cause
- Recommendations level: 'Should' or 'How' to be done
- Published in March 2018
- Co-sponsored by FAO, IAEA, ICAO, IMO, ILO, INTERPOL, OECD/NEA, UN OCHA, WHO, WMO



Emergency phases



Transition to an existing exposure situation

- An emergency involving significant releases of radioactive material in the environment:
 - Results in an **emergency exposure situation**
 - Will be terminated for entering into an **existing exposure situation** with regard to public exposures
 - Will be terminated for entering into a **planned exposure situation** with regard to occupational exposures, as the facility, the activity or the source involved in the emergency will undergo clean-up, decommissioning or ending of the operational life of the source

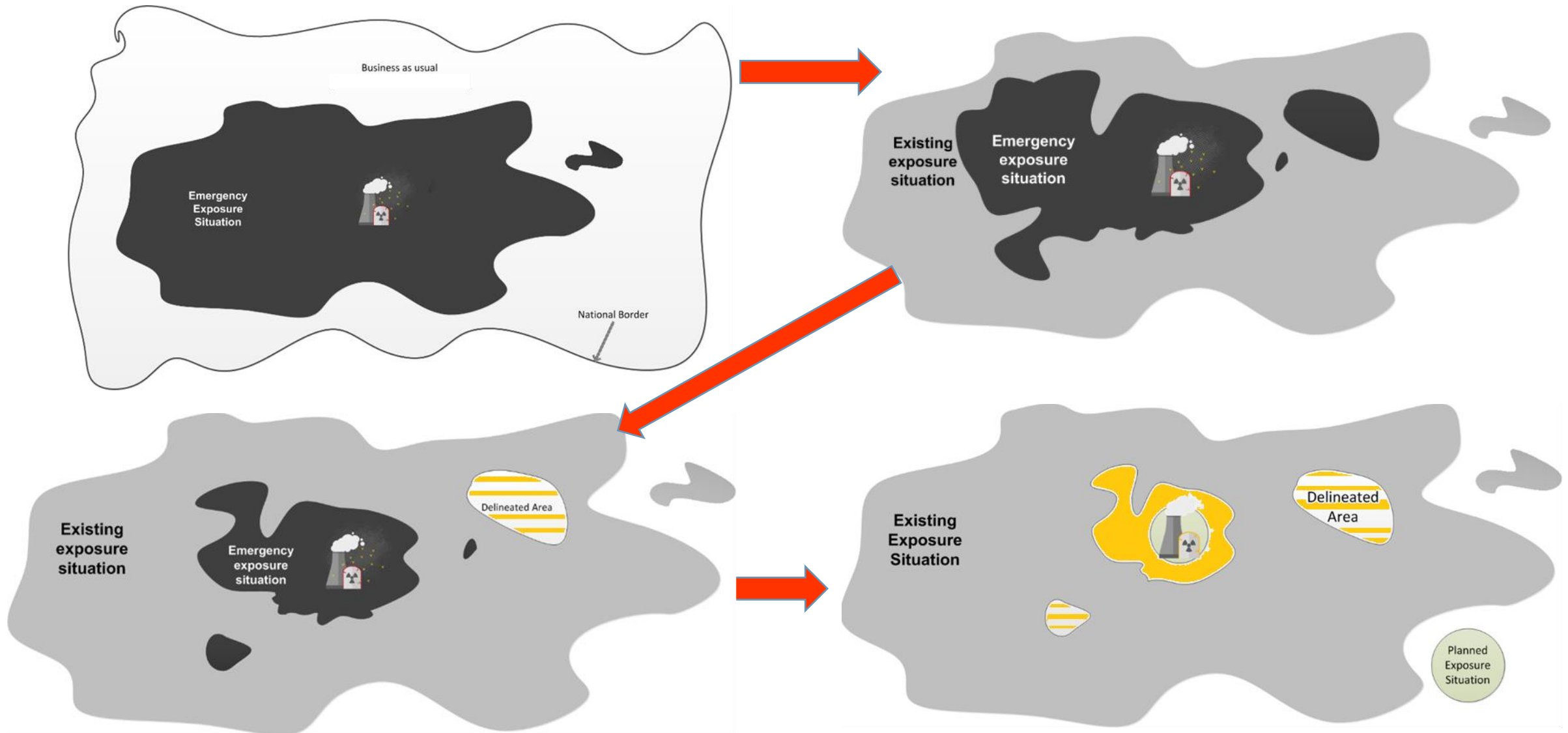
Transition to a planned exposure situation

- Emergencies that do not involve significant releases of radioactive material into the environment:
 - Do not introduce a situation of exposure to the public that differs from the one that existed before the emergency
 - Might not necessarily result in an emergency exposure situation
 - Will be terminated for entering into a planned exposure situation with regard to occupational exposures, as the facility, the activity or the source involved in the emergency will undergo clean-up, decommissioning or ending of the operational life of the source

Important considerations

- The complexity of the radiological situation might vary greatly within an affected area after a large-scale emergency and might be transient in nature
 - Different phases and different exposure situations will coexist **geographically and temporally**
 - Transition will occur **gradually** in specific areas within the entire affected area
 - In such a case, the transition phase will end when the final area that was in an emergency exposure situation transitions to an existing exposure situation
 - The transition of this final area to an existing exposure situation will also denote the overall termination of the emergency

Illustration – Transition to an existing exp. situation



Primary objective and prerequisites in GSG-11

- The primary objective of the termination of the emergency is **to facilitate the timely resumption of social and economic activity**

Goal of emergency response, para. 3.2 (i) in GSR Part 7:
“To prepare, to the extent practicable, for the resumption of normal social and economic activity.”

- General prerequisites are applicable for any type of emergency
- Specific prerequisites are applicable for transition to either an existing exposure or a planned exposure situation

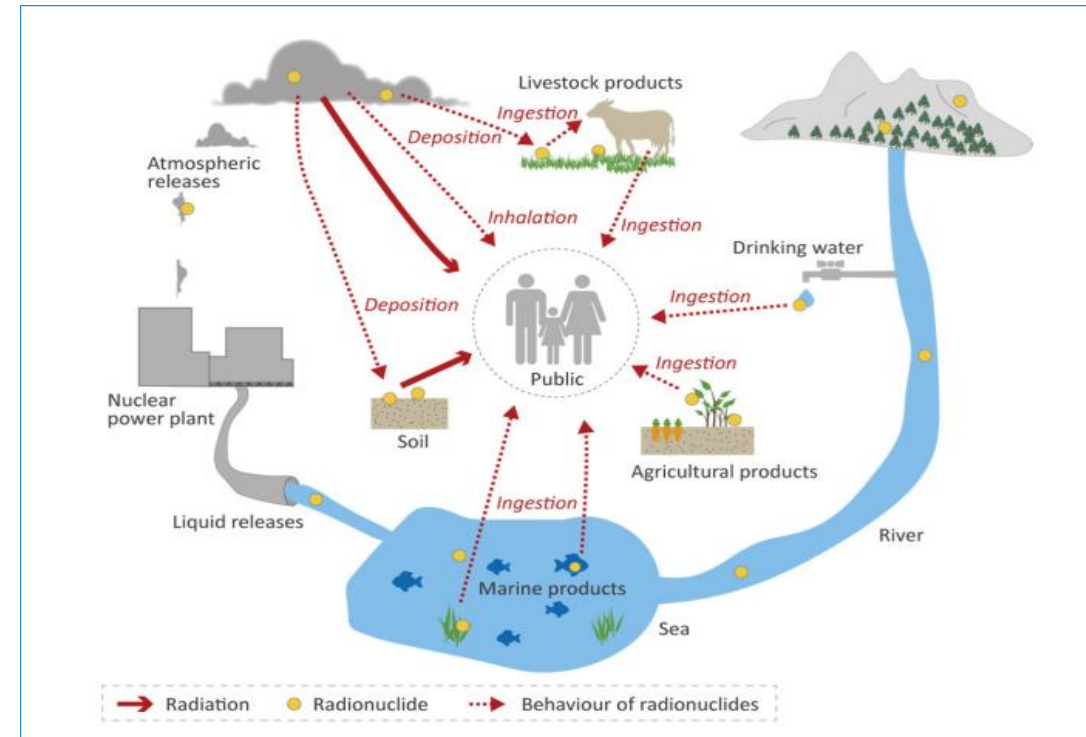
General prerequisites in GSG-11



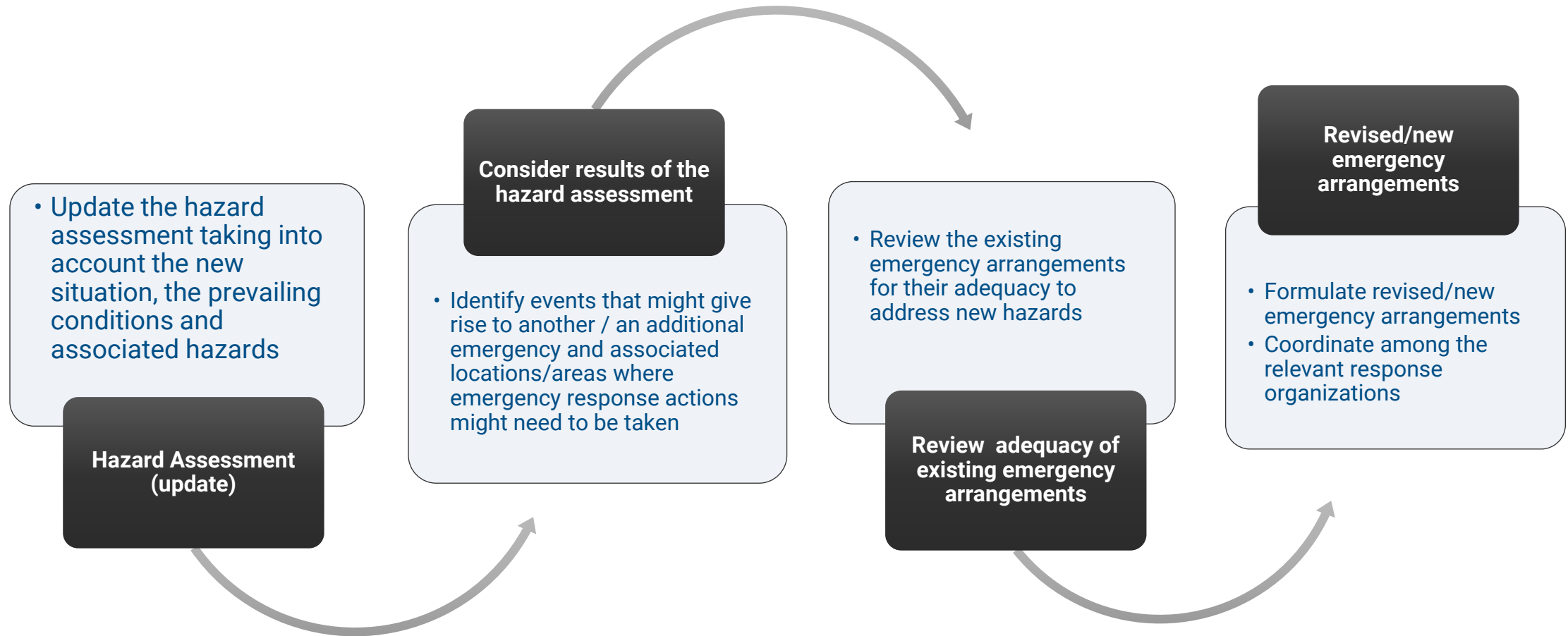
- **Implement** all necessary urgent and early protective actions
- Bring the source of exposure under **control** and ensure that no further significant releases or exposures are expected
- **Understand** well the future development of the situation

General prerequisites in GSG-11

- **Characterize the radiological situation:**
 - Identify exposure pathways
 - Assess doses for affected populations
- **Assess** the radiological situation against (as appropriate):
 - Reference levels
 - Generic criteria
 - Operational criteria
 - Dose limits



General prerequisites in GSG-11



The establishment of an interim response capability in the transition phase should be considered to prevent unnecessary delay in the termination of the emergency

General prerequisites in GSG-11

- Confirm that the requirements for occupational exposure for a planned exposure situation can be applied **to all workers to be engaged in recovery activities**
- Confirm that the **source is secured** (i.e., it has been found; or all fragments have been retrieved found; found and shielded so it no longer presents a public hazard)
- Establish a **registry** for those identified who require **longer term medical follow-up**

General prerequisites in GSG-11

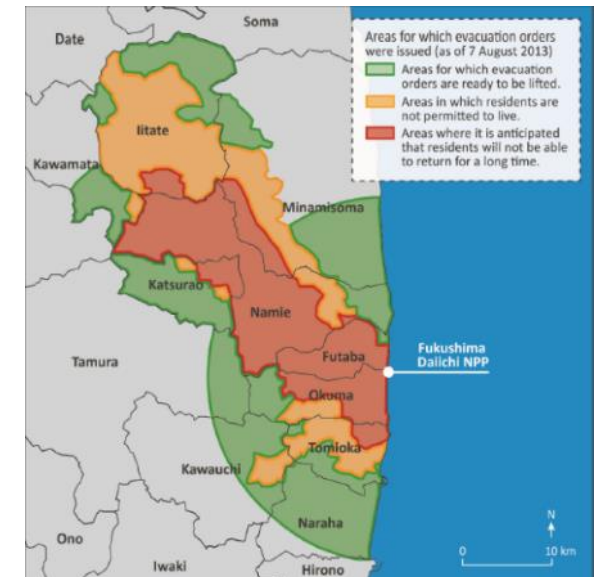
- Identify relevant **non-radiological consequences** and factors, and consider actions to address them
 - Psychosocial and economic
 - Technology, land use options, availability of resources and social service, community resilience
- Consider activities to manage **radioactive waste** arising from the emergency

General prerequisites in GSG-11

- **Involve and consult interested parties to build/maintain public trust in, and public acceptance of, decisions** but without unduly impeding the timely and effective decision making to terminate the emergency
- Discuss with, and communicate to, the public and other interested parties relevant information, e.g.:
 - The basis and rationale for the termination of the emergency
 - The need for adjusting imposed restrictions
 - Necessary modification in people's personal behaviours and habits
 - The need for continued monitoring and activities to restore services and workplaces
 - Associated radiological health hazards

Transition to an existing exposure situation

- Delineate areas:
 - Areas that are not permitted to be inhabited
 - Areas where it is not feasible to carry out social and economic activity
- Establish administrative and other provisions to monitor compliance with any restrictions imposed in relation to the delineated areas



Transition to an existing exposure situation

- Develop a **strategy** for the restoration of infrastructure, workplaces and public services necessary **to support normal living conditions in the affected areas**
- Complete any **change or transfer of authority and responsibilities**
including from the emergency response organization to organizations responsible for the long-term recovery operations

Transition to an existing exposure situation

- Put in place a mechanism and means for **continuous communication and consultation** with all interested parties
- Organize the sharing of information and data pertinent for long-term planning among the relevant organizations and authorities
- Initiate the development of a **long-term monitoring strategy** in relation to residual contamination

Transition to an existing exposure situation

- Develop a programme for **longer term medical follow-up** for the registered individuals
- Develop a strategy for **mental health and psychosocial support** for the affected population
- Give consideration to the **compensation of victims** for damage due to the emergency
- **Put in place administrative arrangements, legal provisions and regulatory provisions for the management of the existing exposure situation**



Thank you!

Safety-Standards.Contact-Point@iaea.org