Proposal for the IAEA MODARIA II Programme (2016–2019)

Air dispersion forecast as support to field actions for population protection - validation

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Underlying problem to be addressed by the proposal

- Air dispersion models: measurements
- Models: 3D + allow forecasting
- Accident -> potential air emissions
  - How the air pollution will develop?
  - Forecast - realistic solutions are available
  - What is the quality of forecast?
- Already implemented in Krsko NPP (Slovenia), automatic, for 7 days in advance, in complex terrain, 24/7 application
Aims and Objectives

• We should test how good are weather forecasts in fine time and space resolutions with emphasis on meteo variables important for dispersion and deposition

• We should test air dispersion based on numerical weather forecast data and compare to air pollution measurements
Main working steps

- Select tracer experiment for dispersion (for instance Šoštanj set)
- Make numerical weather forecast for that period
- Make dispersion forecast
- Compare forecast to actual measurements and to diagnostic reconstruction of concentrations
Expected results and benefits

- Quantitative and qualitative evaluation of the air dispersion forecast accuracy
- Understanding state of the art of air dispersion forecast
- Recommendations for practical applications