GREENPEACE

Off-Site Nuclear Emergency Preparedness &Response

7th November 2013

Lessons from Fukushima

- Failure of nuclear industry to prioritize safety over profit
- Failure of state watchdogs to be independent from nuclear industry and its promotion
- Failure of emergency planning to protect people's health
- Failure of timely and sufficient compensating mechanisms
- Failure of liability regimes on polluters pay principle
- Failure of transparency

Stress tests – The Missing Third Track: Emergency Response

- The European Council called in its Summit of 25 March 2011 for a comprehensive risk and safety assessment of the safety of all EU nuclear plants.

- The European Council concluded further that « *the highest standards for nuclear safety should be implemented and continuously improved in the EU and promoted internationally* »

Stress tests – The Missing Third Track: Emergency Response

- The European Council, Commission and the European Nuclear Regulators Group (ENSREG) designed a two track process for this assessment.

- One was lead by ENSREG and the Commission covering the issues of robustness of nuclear installations in the face of earthquakes, floods, extreme weather events, loss of power, loss of ultimate heat sink and **on**-site emergency response.

- The other track covered security issues (terrorist attack, sabotage) and was carried out by a Council working group, the Ad Hoc Group on Nuclear Security (AHGNS).

Stress tests – The Missing Third Track: Emergency Response

Off-site emergency preparedness & response – evacuations, protection of the population and the economy from radioactive contamination, disruption of economic processes, information supply and communication, etc. – was not included in either of the tracks.

Stress tests – The Missing Third Track: Emergency Response

- The Fukushima disaster in Japan proved that emergency response was one of the key-weaknesses during the catastrophe and in its aftermath

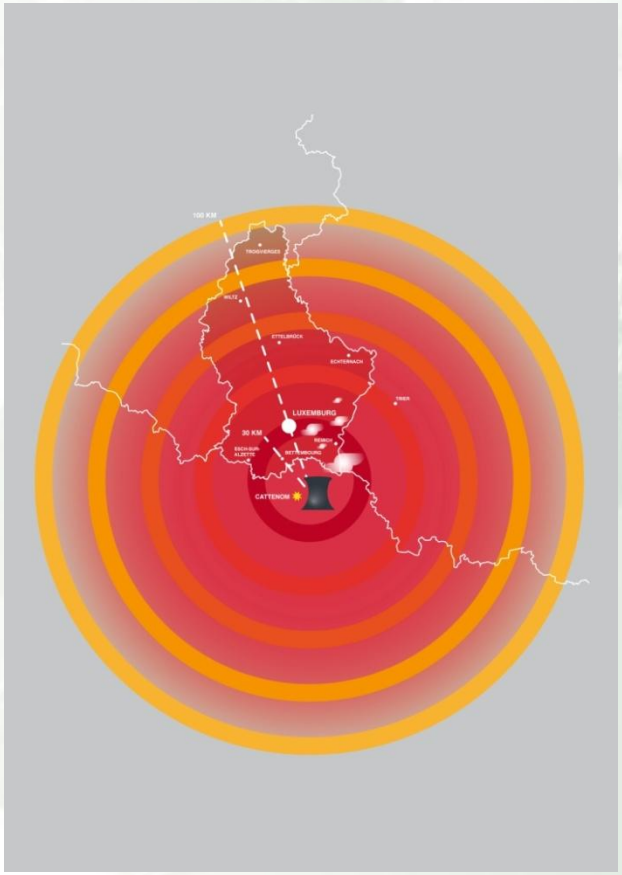
There was confusion about :

- evacuation possibilities,
- the implementation of radiation exposure criteria for different parts of the population,
- the assessment of contamination of food, of the spread of radiation and identification of hotspots,
- the communication towards the population and foreign authorities,
- the provision of compensation, etc..

Stress tests – The Missing Third Track: Emergency Response

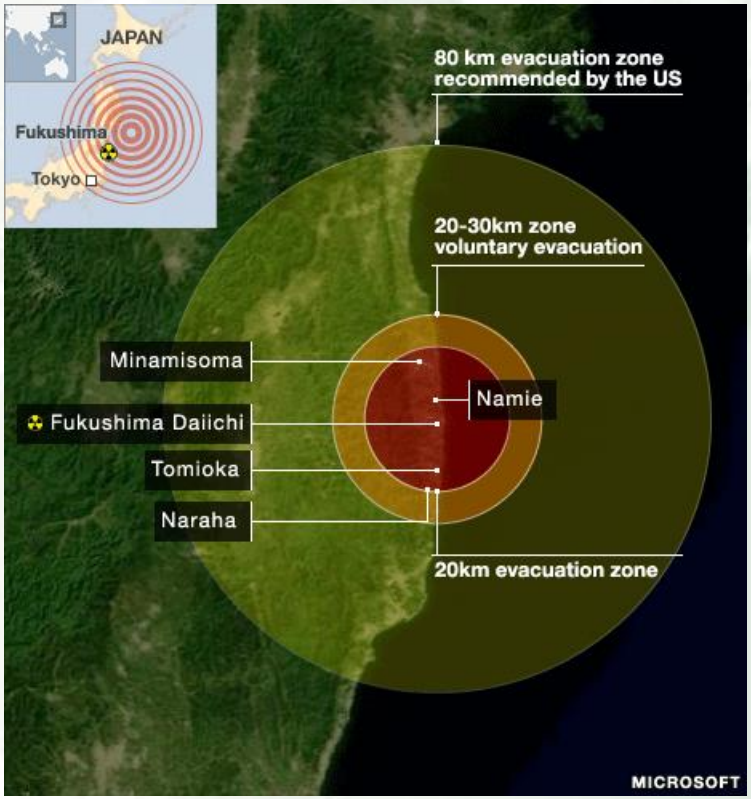
- In the EU and Switzerland, 19 nuclear power stations with a total of 39 reactors are within a radius of 30 km from cities with over 100 000 inhabitants.

- Forty seven power stations with 111 reactors have more than 100 000 inhabitants living in a circle of 30 km. From those, 7 power stations with 13 reactors more than 1 Million.



Stress tests – The Missing Third Track: Emergency Response

- Because the Fukushima catastrophe has reminded us that a severe accident with a large emission of radioactive substances into the environment cannot be completely excluded, it is of paramount importance that the risk-assessment of nuclear installations in the EU also contains the aspect of emergency preparedness and response.



Stress tests – The Missing Third Track: Emergency Response

- Greenpeace therefore called upon the European Council to add a third track of assessment to the “stress tests”, including a full assessment of emergency preparedness & response.

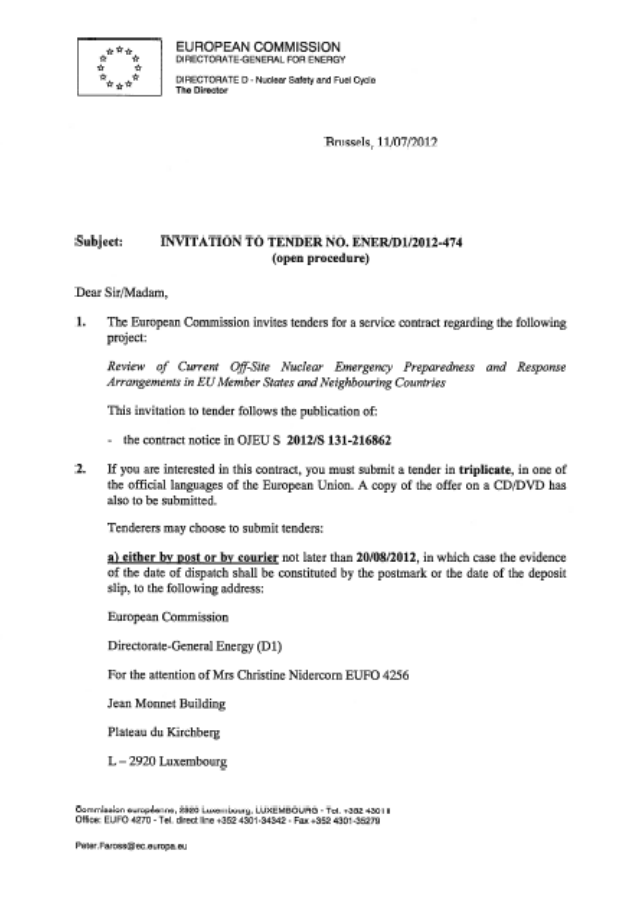
- This assessment should draw conclusions concerning the viability of emergency response, address weaknesses and threats and propose improvements or, where necessary, assess whether there should be consequences for the license of certain nuclear installations.

EU Commission response

- As a first step, the Commission called for a “Review of current Off-Site Nuclear Emergency Preparedness & Response arrangements in EU Member States and Neighbouring Countries”.

- The geographical scope was limited to the 28 member states of the EU and the neighbouring countries Norway, Switzerland and Armenia.

- Consideration was limited to arrangements and capabilities for EP&R at operating nuclear power plants



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

DIRECTORATE D - Nuclear Safety and Fuel Cycle
The Director

Brussels, 11/07/2012

Subject: **INVITATION TO TENDER NO. ENER/D1/2012-474**
(open procedure)

Dear Sir/Madam,

1. The European Commission invites tenders for a service contract regarding the following project:

   Review of Current Off-Site Nuclear Emergency Preparedness and Response Arrangements in EU Member States and Neighbouring Countries

   This invitation to tender follows the publication of:

   - the contract notice in OJEU S **2012/S 131-216862**

2. If you are interested in this contract, you must submit a tender in **triplicate**, in one of the official languages of the European Union. A copy of the offer on a CD/DVD has also to be submitted.

   Tenderers may choose to submit tenders:

   a) either by post or by courier not later than **20/08/2012**, in which case the evidence of the date of dispatch shall be constituted by the postmark or the date of the deposit slip, to the following address:

   European Commission

   Directorate-General Energy (D1)

   For the attention of Mrs Christine Nidercorn EUFO 4256

   Jean Monnet Building

   Plateau du Kirchberg

   L – 2920 Luxembourg

Commission européenne, 2920 Luxembourg, LUXEMBOURG - Tel. +352 4301
Office: EUFO 4270 - Tel. direct line +352 4301-34342 - Fax +352 4301-35279

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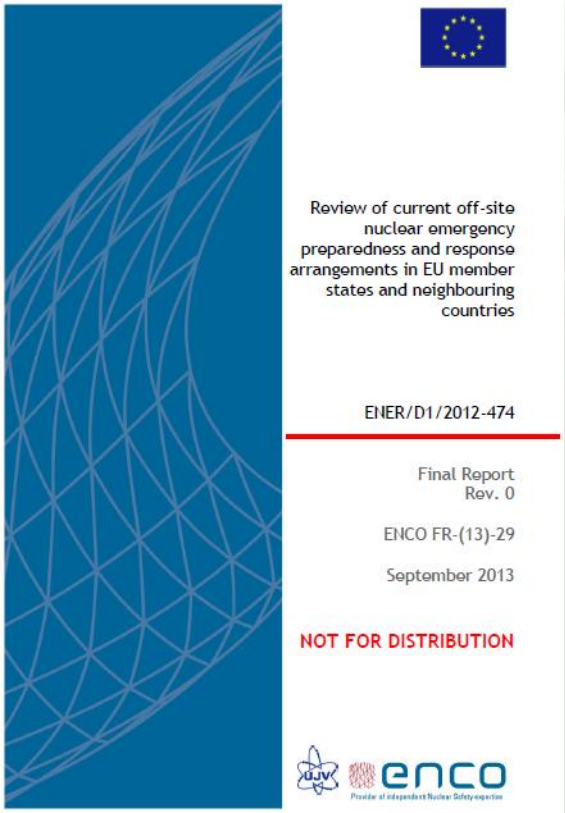
The report

- The report was done by ENCO and UJV.
- Information has been collected in order to identify good/best practice, possible gaps, inconsistencies, duplication, etc.
- The report has been discussed by a Core Group and a Stakeholder Group and representatives from the European Commission



Conclusions and Recommendations

- **1 Compliance with European legislation and international Requirements**

There are significant differences in the regulatory frameworks (eg, responsibilities for developing plans, for implementing response, etc) adopted by European countries for off-site EP&R.

- **2 Emergency Planning Zones (EPZ)**

There is large variation (by more than an order of magnitude) in the size of EPZ around NPP in Europe.

- **3 Intervention levels (IL) and operational intervention levels (OIL)**

Some countries believe that the adoption of different intervention levels in neighbouring countries is a major source of public concern resulting in a loss of trust and confidence in the broader EP&R arrangements

Conclusions and Recommendations

- **4 Off-site emergency personnel and rescuers**

Questions were raised as to the adequacy of current arrangements in this area, in particular resources for medical care.

- **5 Cross border arrangements**

There are major differences in how they are implemented, both in the nature of arrangements in practice and in the extent to which they are governed by any binding legal basis or more substantive political accord.

- **6 Protection of European citizens in countries other than their own**

European citizens in Japan following the Fukushima accident were provided with disparate and often conflicting information regarding their protection by their respective governments and embassies

Conclusions and Recommendations

- **7 Exercising of arrangements**

Off-site EP&R arrangements are exercised periodically in all countries at local, national and supra-national levels with varying frequency and levels of detail, realism and challenge.

- **8 Practical aspects of protective measures**
- 8.1 Early protective measures

Issue of stable iodine, Sheltering, Evacuation, Food and drinking water,

- 8.2 Medical support and treatment of members of the public
- 8.3 Longer term protective measures

Relocation (and/or subsequent return) Decontamination of the built environment

Conclusions and Recommendations

- **9 Technical support for decision making**

Plant status, early warning and radiation monitoring systems, radiation survey and environmental measurements, models and systems to aid decision making

- **10 Public information and communication**

This issue has received much attention at an international level post Fukushima and has resulted in significant developments.

- **11 Mutual Assistance**

There is much potential within Europe to make more effective use of existing resources and capabilities, minimize unnecessary duplication and achieve major cost savings through shared development and maintenance of expensive but rarely used assets.

Conclusions and Recommendations

- **12 Extendibility and Robustness of Arrangements**

Almost all countries with operating NPP have plans/arrangements for EP&R beyond the EPZ (though often of a less detailed nature); these arrangements are in most cases exercised, albeit at varying frequencies. Little information, however, was provided on the nature of the arrangements and/or how they are exercised.

- **13 Interface between research, operational and policy communities on EP&R**

Conclusions and Recommendations

- **14 Arrangements within the EC on EP&R**

The Commission should evaluate the merits of introducing a requirement for periodic peer reviews of off-site EP&R arrangements and capabilities to ensure they are, and remain, compliant with provisions in the EU Basic Safety Standards Directive and with other international requirements.

- **15 Implications of the revision of GS-R-2 and the EU Basic Safety Standards**

Next steps

- The EU Commission will prepare a communication for the Council and the Parliament before the end of the year.
- The report will be published
- It is not clear whether there will only be recommendations or a proposal for a directive or a legal initiative

Greenpeace conclusion

- The situation is like before the Euro was introduced: we have a strong German Mark, a stable French Franc and a weak Italian Lira.

- We probably can't have the same systems in all countries, but we need the highest standards everywhere.

Greenpeace conclusions

- The study is a paper exercise : what is the reality?
- It is a self assessment by each country
- There is a lot of uncertainty in Emergency Preparedness & Response
- Effective emergency response is presently not available at national level and not possible at international level.
- If you can't protect your populations, you should close risky nuclear power plants

Thank you

Roger Spautz; 7th November 2013