

**Nuclear Transparency Watch**  
Working Group on  
Nuclear Emergency Preparedness & Response  
Inception Seminar  
2014, February 6-7

**Concept and design of a trans-boundary  
German- French-Luxemburg-Belgium  
Aarhus Round Table on EP&R provisions Cattenom**

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# Why a trans-boundary Round Table EP&R Cattenom?

## **Flaws, blind spots and complacency – Cattenom in the Nuclear stress test report 2012 from Greenpeace**

- Cattenom has four reactors, the oldest from 1987. It is located by the river Mosel, about 9 kilometres from the border with Luxembourg and 50 kilometres from its capital.
- Regulators raise concerns over the plant's ability to deal with earthquakes and flooding.
- During checks conducted in August 2011, national regulators found 35 non-conformances with national regulations during spot check. This indicates a poor safety culture at the site as managed by EDF.
- Cattenom should be phased out as soon as possible.

# Why a trans-boundary Round Table EP&R Cattenom?

## Population around Cattenom NPP

Cattenom is one of the NPPs with the most dense population in France and in Europe, which would make an evacuation extremely difficult especially as 3 countries would be directly affected by an accident.

Within a 5 km range live 75.000 people and within a 30 km range 353.000 persons.

**Source: La population autour des sites nucléaires Français: un paramètre déterminant pour la gestion de crise et l'analyse économique des accidents Nucléaires. A. Pascal; IRSN, 2012**

**TABLEAU I**  
Population autour des sites nucléaires français.  
Population around the French nuclear power plants.

Site/Distance	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	110
Belleville	9	29	47	64	97	110	140	169	212	268	610	832	1165	1520	1781	2068
Bugey	14	68	114	284	470	1255	1444	1755	2031	2246	2731	3244	4408	5185	5780	6126
Cruas	44	63	105	142	196	279	416	495	549	710	837	1108	1552	2277	3203	3697
Chooz	14	24	57	96	145	214	444	652	836	1039	1634	2271	3736	5263	6743	8381
Nogent	11	21	48	78	101	134	213	279	449	553	836	1419	2558	5056	9130	11422
Tricastin	38	73	107	187	267	343	433	636	762	883	1286	1615	1891	2191	2953	3508
Blayais	6	28	50	82	124	163	245	585	777	1028	1326	1487	1775	1945	2126	2442
Chinon	26	37	87	113	159	189	298	529	627	776	1171	1518	1985	2339	2654	3014
Saint-Alban	41	70	151	306	578	723	1021	1808	2257	2529	2957	3282	3864	4388	4820	5102
Saint-Laurent	23	35	56	94	213	396	492	592	654	711	848	1044	1553	1990	2396	3046
Dampierre	6	40	59	74	102	152	220	266	476	578	772	1119	1485	1899	2629	3711
Flamanville	8	15	50	117	147	161	173	195	207	222	260	296	374	446	556	754
Cattenom	75	101	192	353	598	876	1212	1420	1642	1892	2419	2947	3489	4018	4540	5045
Gravelines	35	138	202	342	401	451	537	637	715	843	1309	1953	2590	4586	5281	5929
Fessenheim	7	62	157	379	875	1036	1281	1485	1742	2014	2734	3779	4924	5917	7287	8580
Penly	6	58	91	116	151	191	224	266	340	417	794	1204	1627	2106	2592	3141
Paluel	9	20	34	73	98	180	242	337	411	700	1162	1369	1538	1765	2089	2545
Golfech	12	22	51	121	161	220	313	366	426	518	677	1383	1621	1891	2175	2477
Civaux	15	22	42	65	175	227	274	343	388	431	529	711	1030	1423	1984	2355
Marcoule	68	90	167	328	441	553	842	906	1072	1234	1487	1714	2141	2803	3918	4205
La Hague	7	35	95	120	136	155	166	180	192	200	223	253	324	379	450	579
Romans	59	85	192	257	315	358	436	522	611	821	1380	2076	3274	4028	4473	4870
Malvési	62	83	113	213	253	281	310	363	467	564	834	1085	1497	1656	1902	2179

Trame gris foncé : maximum de chaque colonne. Trame gris clair : deux valeurs suivantes.  
Gras : valeurs corrigées manuellement. Italique : valeurs interpolées

Poor safety culture leads to  
**Japan – Final Report FUKUSHIMA**

The TEPCO Fukushima Nuclear Power Plant accident was the result of collusion between the government, the regulators and TEPCO, and the lack of governance by said parties. They effectively betrayed the nation's right to be safe from nuclear accidents. Therefore, we conclude that the accident was clearly "man made."

Poor safety culture - and what about a

# TERROR ATTACK

German expert Oda Becker

- No nuclear power plant will withstand an Airbus A 380
- Russian bunker-breaking weapon AT 14 will be disastrous

# In Germany the disaster is getting bigger

## **Study of the Federal Office for Radiation Protection (BfS)**

- A severe nuclear accident can have much wider ranging consequences than previously officially supposed.
- The civil protection is not prepared at all.

## **Therefore the German Interior Ministers are discussing**

- To expand the “central zone” from 2 km to 5 km, evacuated within 6 hours; to expand the “middle zone” from 10 km to 20 km, sectors in wind direction evacuated within 24 hours; to expand the “far zone” from 100 km to 200 km; new emergency plans open to the public; 50 mSv as annual radiation dose for long-term resettlement, today 100 mSv; iodine tablets nationwide for children, teenager, pregnant.

**Nuclear experts, doctors and NGOs say: Not enough at all.**

# What would be necessary?

## **A trans-boundary Aarhus Convention Roundtable on emergency management in the post-Fukushima context**

Public workshops for emergency plans in all possible affected councils and cities, together with the civil society, rescue teams and the authorities to take as much as possible unexpected local problems into account **before** the emergency case!

The German partner NPP

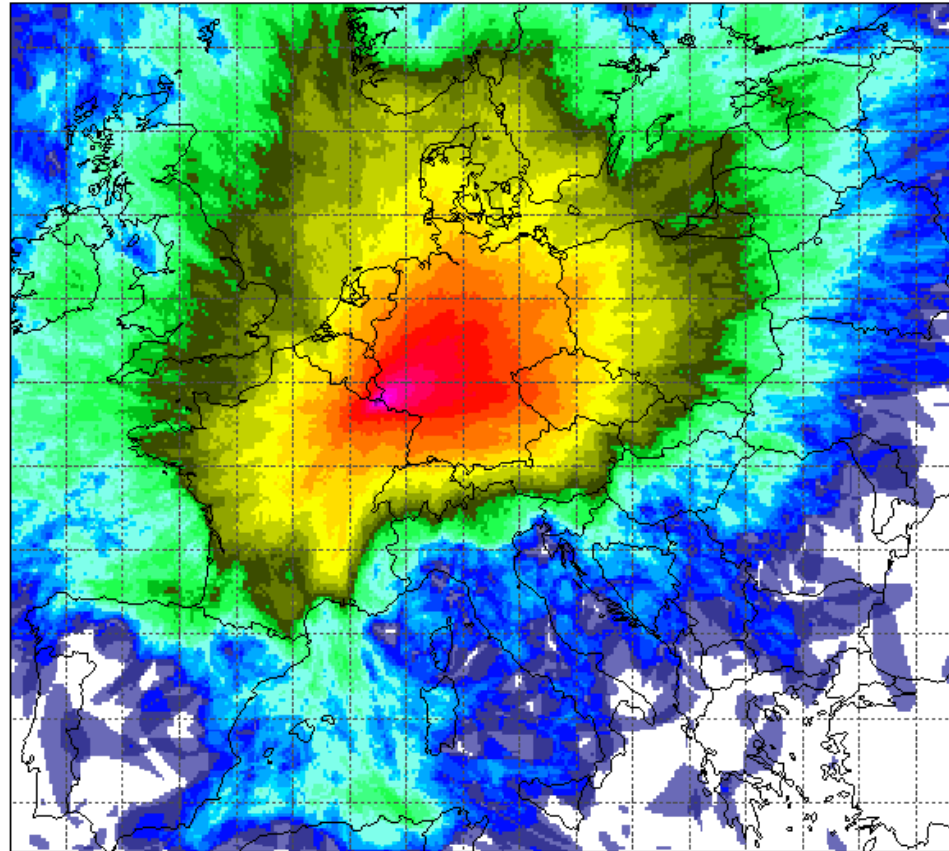
- **Grafenrheinfeld** - operated for 29 years by E.ON with a micro crack in a main cooling pipe - phase out at the end of 2015
- **Philippsburg** - possible storage for the last German castors from La Hague – possible phase out 2019 – operator EnBW

The Belgian partner NPP

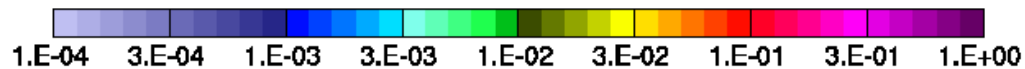
- **Tihange** – unit 2 with cracks in the vessel, operator GDF Suez

## Cattenom-1

[Weather-related] Probability of deposition > 185.00 kBq Cs-137/m<sup>2</sup>  
Maximum in AT 4.45 %



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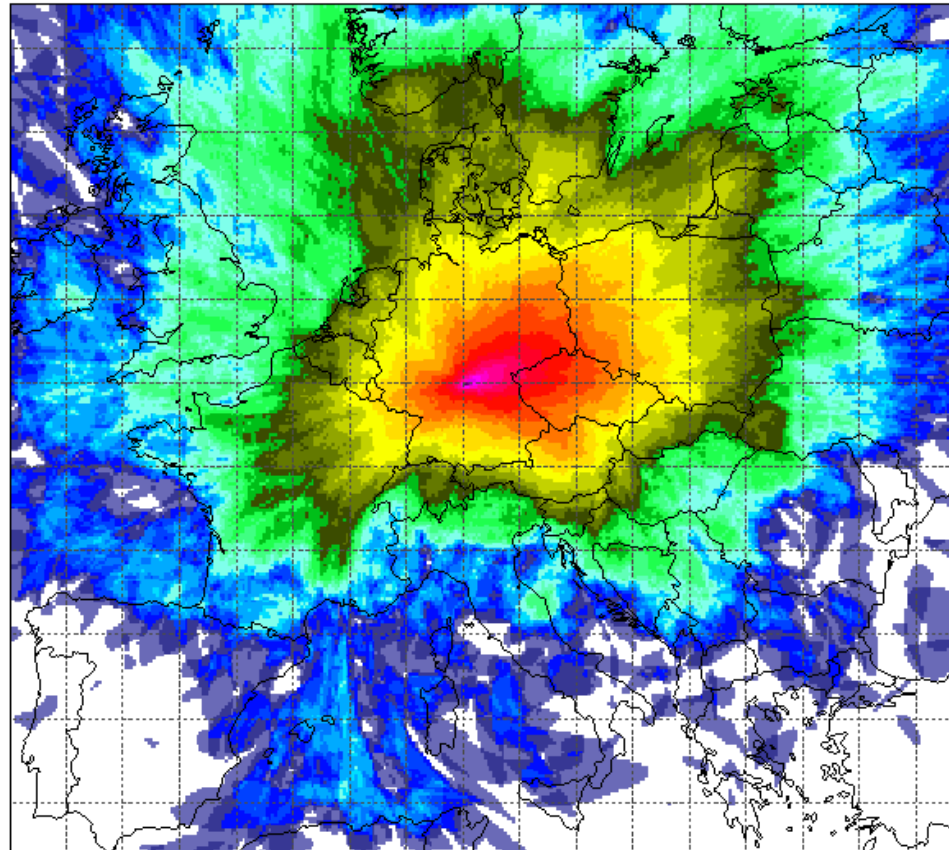
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Why Cattenom? Wind from south-west  
flexRISK source term and release frequency

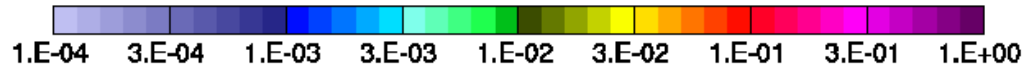


## Grafenrheinfeld-1

[Weather-related] Probability of deposition > 185.00 kBq Cs-137/m<sup>2</sup>  
Maximum in AT 6.17 %



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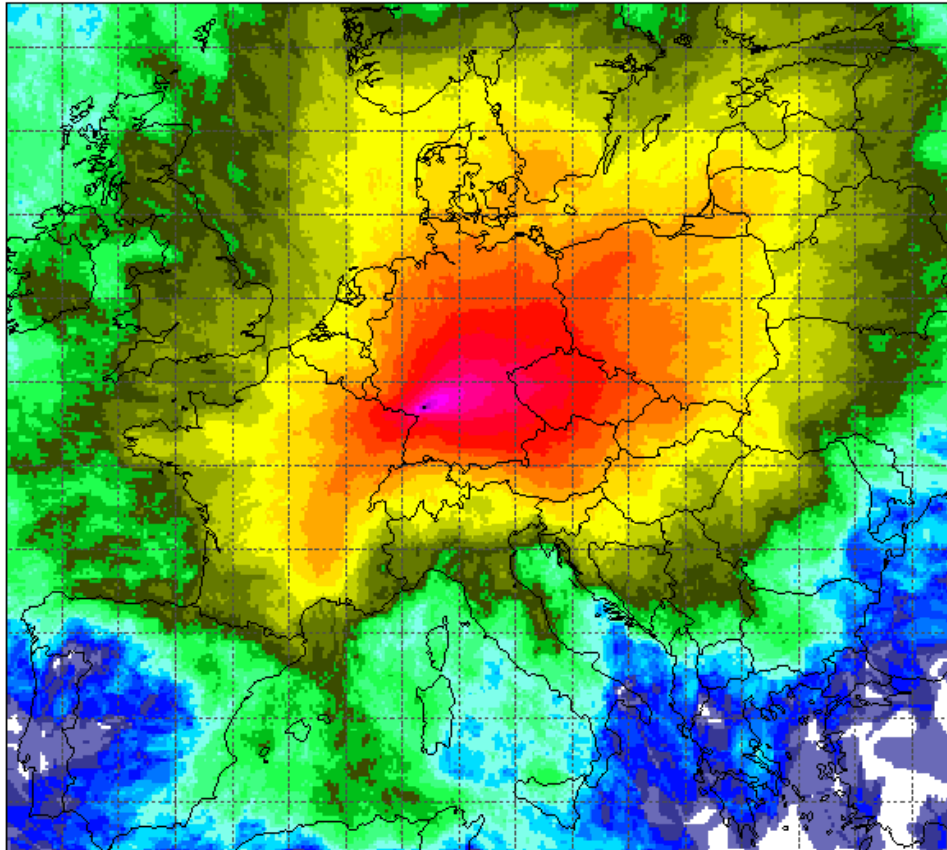


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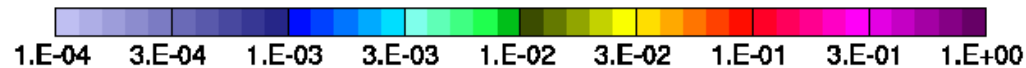
Why Grafenrheinfeld? Wind from south-west  
flexRISK source term and release frequency

## Philippsburg-1

[Weather-related] Probability of deposition > 185.00 kBq Cs-137/m<sup>2</sup>  
Maximum in AT 9.36 %



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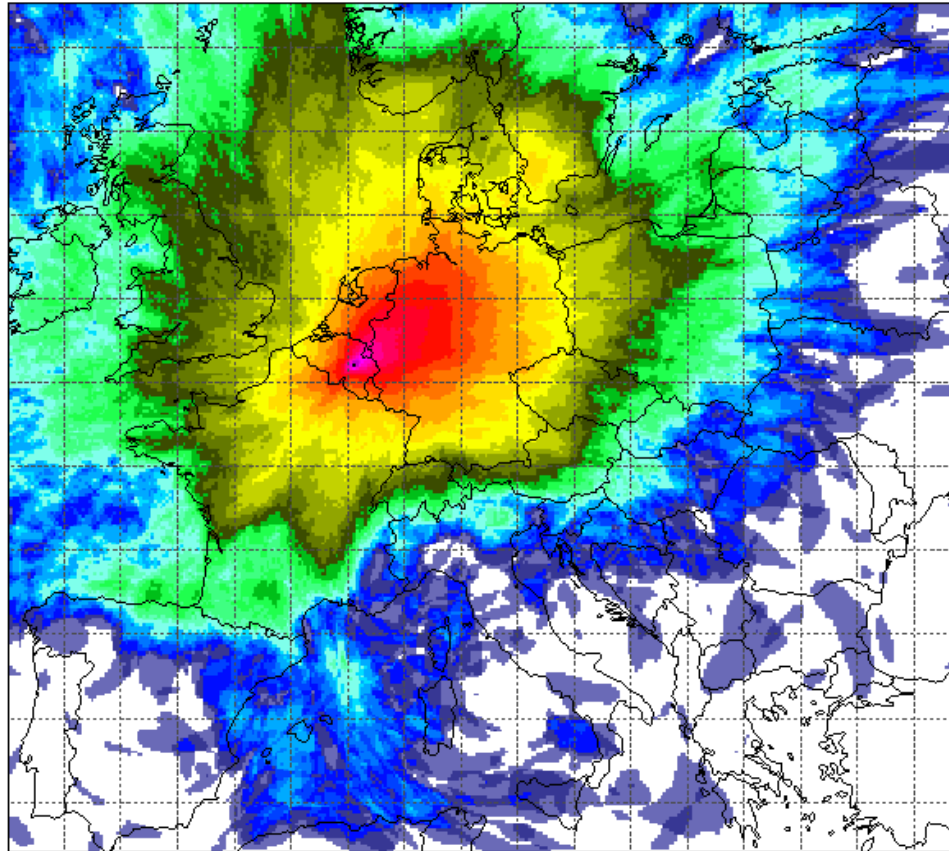


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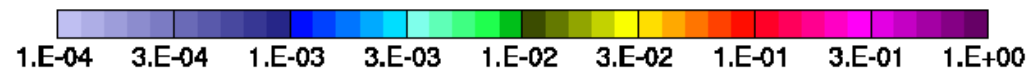
Why Philippsburg? Wind from south-west  
flexRISK source term and release frequency

## Tihange-1

[Weather-related] Probability of deposition > 185.00 kBq Cs-137/m<sup>2</sup>  
Maximum in AT 2.65 %



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<http://flexrisk.boku.ac.at/en/evaluationAggUnit.phtml#form>

Why Tihange? Wind from south-west  
flexRISK source term and release frequency

# Who should be invited to participate on a trans-boundary Aarhus Round Table?

**The civil society** – their input is more than welcome

- The public concerned
- Natural persons
- NGOs
- Farmers and animal welfare organisations
- Fire brigades
- Technical rescue teams
- Medical rescue teams
- Hospitals and doctors
- Independent experts
- and others ...

**The „Responsibles“** – also invited to finance the RT

- The operators
- The regulators
- The Aarhus Convention
- The European Commission
- Federal state and national Ministries: Environmental, Interior and Economic
- Communities/ Councils/ Districts
- Independent experts

# Why should the public participate?

## For safety and ethic reasons

- How to survive a meltdown?
- How to rescue loved ones?
- Who will rescue my children in school?
- How to rescue loved pets?
- Where will my family be evacuated to?
- For how long?
- and so on

## For economic reasons

- How high is the liability?
- How high is compensation
  - for lost properties for long- time evacuated?
  - for persons who will be resettled into their high contaminated properties?
  - for farmers? What about cattle and crop?
- and so on...

# Rescue teams need a public Round Table

## **Urgent questions must be discussed with the public – like**

- Who will be the liquidators? Is the police prepared for a public panic? Is the army prepared to intervene? Who wants to risk civil war because of a man made catastrophe? And - what to do with left behind cattle and pets?
- Are enough iodine tablets accessible? Will there be enough busses for evacuation? Medical staff and hospitals are prepared? Are the rescue teams prepared to work trans-boundary?
- Are there enough nuclear rescue trucks for the fire brigades? In Germany definitely not! Most German fire fighters and technical rescue teams are volunteers and are free to rescue their own families!
- What about drinking water from rivers and open reservoirs? What about food? Even today food levels are too high!

# Aarhus Round Table EP&R Cattenom

## **The first meeting of the Aarhus Round Table EP&R Cattenom will take place in early summer 2014**

- Until the Governments will do so, the public from Germany, France, Luxemburg and Belgium will invite the Governments.
- At the moment supporters are Greenpeace, Cattenom Non Merci, Anti Atom Aachen, STOPPT Temelin, members of the civil society, politicians ...

## **The Aarhus Convention demands public participation on decision making environmental matters**

- Governments have the responsibility to ensure the safety of their residents, they and the operators of the nuclear power plants should invite the public and finance the Round Table.

Most important is prevention!

Phase out now!



NO MÁS FUKUSHIMA  
GREENPEACE

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