

Crisis preparedness among inhabitants in the nuclear zone of Mol/Dessel (Belgium)

Results of a survey on the knowledge of citizens regarding reflex measures

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STORA



Context of this research

- Presentation by Herman Sannen (STORA) on involvement of local citizens in Belgium earlier today
 - NW storage in Dessel and Mol since 1950's
 - Local partnerships STORA and MONA since 1999-2000
- Optimizing emergency preparedness
 - **Baseline measurement of citizens' knowledge about the five reflex measures prescribed by the federal government**

Blijf binnen of ga naar binnen.



Schillen in het dichtst bijzijnde gebouw is een eenvoudige, snelle en doeltreffende maatregel om uzelf te beschermen. Blijf binnen tot het alarm officieel wordt opgeheven.

Sluit ramen en deuren.



Neem plaats in een centrale ruimte op het gelijkvloers van het gebouw. Verwijder u van vensters, die minder bescherming bieden dan muren.

Luister naar de radio en kijk TV.



Voor verdere aanbevelingen en informatie.

Telefoneer niet onnodig.



De overbelasting van het telefoonnetwerk kan de hulpverlening verstoren.

Laat de kinderen op school.



Binnen blijven is ook hun beste bescherming. De leerkrachten volgen dezelfde richtlijnen als u.

The survey

- **Main questions**
 - What is the level of the knowledge of citizens regarding reflex measures?
 - Would people follow the advice of the government?
- **Additional questions**
 - Knowledge on iodine use & 'risk culture'
 - Risk perception
 - Information seeking behavior
- **Three phases** (February – May 2017)
 - Preparation (UA), Data gathering (FQC), Analysis (UA)

Sampling and method

- Randomized Quota sample
 - All 16 + residents of Mol (36 122) and Dessel (9 350) with a registered phone number could be randomly called
 - Purpose: reach 50 respondents (25 male/female) of four age groups in both municipalities (N = 400)
 - Allows for comparison (Age, sex, municipality)
 - Relevant for possible communication strategy
 - Response rate of 62%
 - Larger number of respondents interviewed (**N = 437**)
- Computer Aided Telephone interviewing (CATI)
 - Standardized questionnaire (Dutch/English)
 - Closed and half open questions
 - Average of 8 minutes

Results: Knowledge of reflex measures

"Suppose a major nuclear incident occurs in the region. Can you mention the things you should do immediately to protect you and your family?"

Reflex measure	Percentage of respondents who spontaneously gave this measure in response to the question
Measure 1: Stay inside or go inside/take shelter/stay at home	49%
Measure 2: Close windows and doors/close everything/ Turn off ventilation	30%
Measure 3: Turn on radio and television to follow the news/ put on the national station/ listen to the information	27%
Measure 4: Keep the telephone lines open as much as possible/call only in case of an emergency	1%
Measure 5: Leave the children at school	1%
No (official) measure	
Take iodine tablets if advised by the government	17%
Run away/ drive away	11%
Call my family immediately to let them know where I am	0.7%
Take an iodine tablet on my own initiative	37%
Pick up my children/family members and flee together	5%

Knowledge of reflex measures

- Behind “taking shelter”, the most often mentioned measure is “taking iodine on their own initiative” (which is not an official measure)
- NO significant differences between age, sex and municipality groups
- Results indicate lower knowledge than those of the Barometer 2009 (SCK).
 - Method: Calling measures spontaneously instead of select the right ones
- Only 1 person mentioned all official reflex measures (5).
 - More often, the first two / three were mentioned in combination with something about iodine. *Confusion about iodine*
- 36% of the respondents could not give any official measure
 - **“one third does not know what to do in case of a nuclear incident!” (news)**
 - **2 measures are hardly known by anybody (phone and children)**

Measures vs. hypothetical behavior?

Differences between the behavior described by the reflex measures and what citizens think they would actually do in the case of a disaster. Desired reflex vs. real behavior (hypothetical)

- Children, telephone, shelter
- Counter intuitive? Not well understood /communicated?

Can you indicate for each advice whether you would follow it?	Definitely/probably would do	Definitely/ probably would not do	Don't know/ no answer
Measure 1: Shelter	91%	8%	1%
Measure 2: Doors and windows	96%	3%	1%
Measure 3: Radio and television	96%	3%	1%
Measure 4: Telephone	80%	10%	10%
Measure 5: Children	70 %	21%	9%

Additional questions

Risk perception

What do you think is the chance of being affected by the consequences of a nuclear incident?	answer percentages
Low-non existent	67%
Average-very high	23%
Don't know/no answer	10%

- **Correlation** between high/low risk perception and seeking behavior/knowledge? YES
- Positive correlation? NO
- People with high risk perception knew less reflex measures than those with a low risk perception. ~(2012 , Simmons, Pidgeon, et al.) on distance
- → Repeat research in neighboring municipalities?

Information seeking behavior

Questions	Disagree/strongly disagree	Agree/strongly agree	Don't know/no answer
I think it is my job to look for additional information on these recommended measures.	44,4%	50,6%	5%
I feel sufficiently informed about this topic.	41%	56,1%	3%
The government makes enough efforts to inform me about this topic.	48,3%	45,3%	6,4%
I know where I can find information on these measures.	28,8%	67% (ex. municipality, brochures, STORA..)	4,1%

- **The % of people who feel well informed much higher than % of people who know multiple measures**
- **Also remarkably high % of people who know where to find information**
- **Opinion about efforts of government is almost 50-50**



Conclusions

- **36% do not know any of the 5 official reflex measures that need to be taken in case of a nuclear incident! Knowledge is limited.**
- Important differences between some federal reflex measures and hypothetical behavior (intuition)
- - => Need for an additional local information campaign focusing on 'why'
 - => Need for a reality test of measures at federal level (recognize intuition)
- **Challenges for an effective communication strategy**
 - Many people take little effort to inform themselves and are quick to think they are sufficiently informed even when they know where to find information (70%), and feel they should take initiative (50%)
 - Partly explained by general low risk perception (67%)? Still those who perceive high risk have little knowledge
 - No statistically significant differences per target group

Thank you for your attention!



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