



LINKS

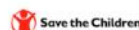


This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 883490

Strengthening links between technologies and society
for European disaster resilience

**THE SAFETY REGION OF SOUTH-LIMBURG, SITECH SERVICES & THE
FREE UNIVERSITY OF AMSTERDAM.**

LINKS (the Netherlands) – Disaster Situation: Industrial Hazard



What is LINKS? [FEU | LINKS project \(f-e-u.org\)](https://f-e-u.org)

LINKS “Strengthening links between technologies and society for European disaster resilience” is a comprehensive study on disaster governance in Europe. The overall aim of the LINKS project is to strengthen links between technologies and society for improved **European disaster resilience**, by producing sustainable advanced learning on the use of **social media and crowdsourcing (SMCS)** in disasters.

In recent years, social media and crowdsourcing (SMCS) have been integrated into crisis management for improved information gathering and collaboration across European communities. The effectiveness of SMCS on European disaster resilience, however, remains unclear owing to the diversity among **disaster risk perception and vulnerability (DRPV)**, **disaster management processes (DMP)** and **disaster community technologies (DCT)** across Europe today. From this point of departure, LINKS sets out to achieve four core objectives:

Five cases in four different countries, all dealing with various hazards. The Dutch case is dealing with industrial hazard.



Find out more: links-project.eu



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LINKS Dutch case team (Industrial Hazard)



Safety region of South-Limburg: *Simone Rutten, Marcel Penders & Emmeline Roeloffs*

A public organization that responds to large scale emergency situations & plays a major role in the risk communication in the surroundings.



Sitech Services: *Jan Starmans*

A technical service provider for the organizations/facilities on the industrial site, Chemelot. SiTech is the partner representing Chemelot in the Dutch case team.



VU Amsterdam: *Lieke Rijkx & Emmeline Roeloffs*

We work together with researchers from the VU (Free University) in Amsterdam.



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Dutch case team strategy

In short:

Our goal is to improve **risk communication and disaster preparedness** for those living in the surroundings of Chemelot.

We aim to do this by:

- Establishing a **foundation of trust** with the local community.
- Establishing a **(social) network of relations** with key figures from the community (ambassadors).

LINKS community workshops and other LINKS products assist us in achieving these goals.



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LINKS Dutch case: Chemical Industry (Chemelot)

Chemelot is an industrial multi-user site & research campus of 880 ha, 64 industrial plants, 150 organizations on the site, with more than 8000 employees. An incident on the Chemelot site can have major consequences for the surrounding area.

A malfunction can result in flammable, explosive and/or toxic substances releasing into the air. A (chemical) fire can cause a lot of smoke. **Chemical substances** can be carried with the wind to nearby residential areas. Less self-reliant people, such as children or the elderly, are less capable of bringing themselves to safety and are therefore at increased risk (RIVM 2019).

Within LINKS we not only focus on the **general population** but also on the groups which we have identified, through qualitative and quantitative research, that require more targeted information, some of these groups include **healthcare institutions, schools** and **shopkeepers**.



Chemelot is situated between several residential areas, highways and a railroad.



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Another top-down view of Chemelot.



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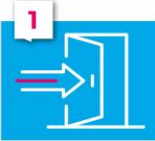


What do you do in the event of a chemical incident?



What to do if the siren sounds

The siren sounds. If it's the first Monday of the month at noon, there's nothing to worry about. You don't need to do anything. If you hear the siren at another time, there is acute danger. Follow the instructions on this card. You can better read the steps now and keep the card in a handy place (e.g. in the fuse box cupboard). This way, you will know exactly what to do if the siren sounds to alert you.



1
Stay indoors or move indoors quickly. Warn others to do the same.



2
Close all windows, doors and grilles.

- If you have a mechanical ventilation system, an on-off button to cut the power is often missing. So pull out the plug. This is often located in the fuse box cupboard or close to the boiler.
- Close grilles for ventilation (windows) or for ventilation exhaust (toilet, shower) – and other openings – or cover with a wet cloth. Close the chimney flap at the fireplace and turn off the extractor fan.



3
Follow the news and instructions on L1 Radio & TV or via the website www.vrzt.nl



4
If the siren stops, do not go outside until you hear that the situation is safe. You will hear that via L1. Or go to www.vrzt.nl



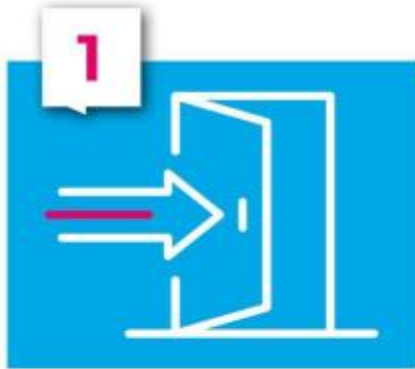
5
Switch the ventilation system back on and reopen the openings (such as grilles).

If there's no siren in your area, there are more ways to warn you of danger. Sometimes you will receive an NL-Alert. Sound trucks may pass through the street too. Follow the instructions carefully.

We are 'Together safe around Chemelot'
Chemelot, South Limburg Security Region, GGD South Limburg,
Province of Limburg, Police, Fire Brigade, Municipality of Beek,
Municipality of Stein, Municipality of Sittard-Geleen



Emergency procedures during a chemical incident (Meterkastkaart)



**Blijf of ga snel naar binnen.
Waarschuw anderen dat
ook te doen.**



Sluit alle ramen, deuren en roosters.

- Heeft u een mechanisch ventilatiesysteem? Een aan-uit-knop om de stroom eraf te halen, ontbreekt dikwijls. Trek dan de stekker eruit. Die zit vaak in de meterkast of dichtbij de verwarmingsketel.
- Maak roosters voor luchtverversing (bij ramen) of voor ventilatie-afvoer (wc, douche) - en andere openingen - dicht of dek af met een natte doek. Maak schouwklep dicht bij een open haard en zet afzuigkap uit.



Emergency procedures during a chemical incident (Meterkastkaart)



Volg het nieuws en
aanwijzingen op L1 Radio & TV
óf via de website www.vrzl.nl



Stopt de sirene? Ga pas naar
buiten als u hoort dat de situatie
veilig is. Dat hoort u via L1.
Of kijk op www.vrzl.nl



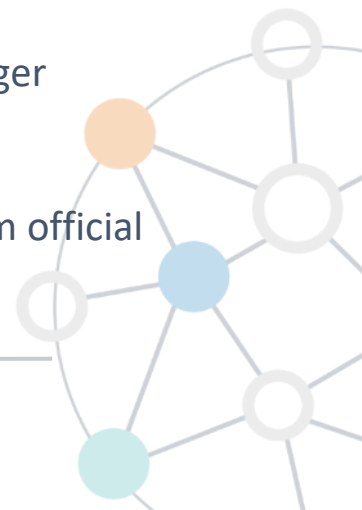
Schakel het ventilatiesysteem
weer in en maak openingen
(zoals roosters) weer open.



The challenges...



-
- Our message seems very simple: close windows and doors, turn off ventilation, listen to the disaster station on the radio and do not go out again until you have heard through official channels that it is safe.
 - During the project, we quickly learned that implementing our message is NOT easy. For example:
 - Not everyone knows how to turn off the ventilation.
 - Not everyone has a radio.
 - Some people think it is safe when the siren has stopped.
 - And if a substance is not visible and has no odor, people often do not take the danger seriously.
 - Several areas for improvement and several challenges are supported by reports from official (government) agencies:





The scientific article written by the RIVM (2020), the RIVM explored the feelings of safety and the information needs of those living in the surroundings of Chemelot.



The findings of conversations with locals in the surroundings of Chemelot, including the dialogue session of november, 2020.



The advice provided by the institute for safety (IFV) regarding the improvement of the risk communication as a result of the chemical incident on the chemelot site on the 3rd of August, 2019.



RIVM Report:

- **The RIVM (2019)** circulated a questionnaire that was completed by nearly 1,000 civilians (from the five municipalities surrounding Chemelot). After the data from the questionnaire were analyzed, the RIVM organized a focus group meeting in which the quantitative data was discussed. Thus, the research conducted by the RIVM resulted in both **quantitative and qualitative** data.
- During the follow-up meetings organized by the RIVM, civilians indicated that they are aware that there are risks in living next to an industrial site such as Chemelot. Residents are also aware that through proper preparation, they can better ensure their own safety.
- The RIVM (2019) report further indicates that initiatives will be started **"to increase cooperative resilience"** this will be done, among other things, by informing people in the area about what they themselves can do to ensure their own safety.
- The RIVM (2019) report also indicates that **neighborhood ambassadors** can play a major role in disseminating this information. The suggestions reflected in the RIVM report, supplemented by our own expert interviews, form the basis of the LINKS project in South Limburg.



Research report by *RIVM* (National Institute for Public Health and the Environment) about the feelings of safety and informational needs of residents surrounding Chemelot.

How are we working on improving the risk awareness?



AMBASSADORSHIP

How do we wish to communicate with citizens?

We would prefer to speak with every citizen one on one, this would be the most effective for our communication. However, this would never be achievable for us. What we have decided on instead is **to locate individuals that play a key role in their social circles/ community**. These people include (among many others) **pastors, Imams, coaches, directors, leaders of neighborhood watch groups and chat groups, famous people from the community** or simply individuals identified by their respective municipality, community, or organization as being a **“key player” for many others** in their social groups.

How does this help us?

Key players can function as ambassadors for our organization (the VRZL). These key players are far more familiar with the communities and social groups they are a part than we are. Rather than posting a general message on our own social media platforms, these key players can greatly assist us by sharing our safety information. With the added benefit that they will already know the most suitable formatting, wording, or platform for their network/ audience.

Why ambassadors?

Research by the RIVM (2019) shows that in neighborhoods close to Chemelot, such as the Lindenheuvel, there are many existing **social media communication channels** (neighborhood watch groups). That are **underutilized by disaster management organizations**. More should be done to tap into the potential of these channels for communication in the cold phase and in the future perhaps also during the warm phase of an incident.



Find out more: links-project.eu



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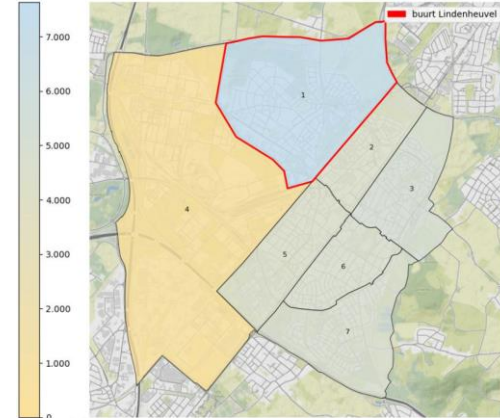
AMBASSADORS PROGRAM: LINDENHEUVEL & LIMBRICHT (THE BEGINNING)

Who are our ambassadors?

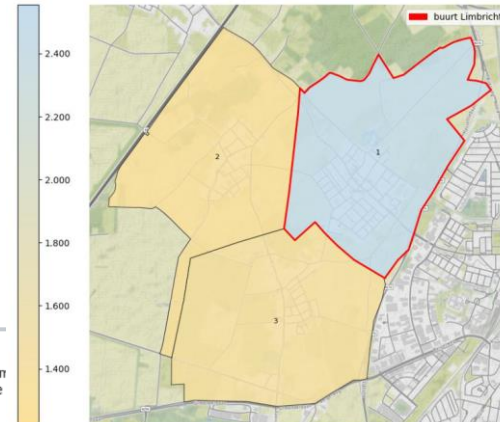
We are targeting large/ important associations, large public stores, large or important catering establishments, healthcare institutions, educational institutions, representative's neighborhood council/ neighborhood app/ neighborhood prevention, well-known residents, religious institutions, representatives of ethnic minorities and social workers/ PIW/ district managers.

Where did we start?

We first tested the ambassador program in small scale. After talking with district managers of Sittard-Geleen and members of a community project we decided to choose **Lindenheuvel and Limbricht** as our pilot locations.



Kaart van de wijk Geleen met het aantal inwoners per buurt in 2022. AlleCijfers.nl.
© Kaartdata van het CBS & ESRI Nederland, kaartachtergrond van Stamen & OSM.



Kaart van de wijk Guttecoven met het aantal inwoners per buurt in 2022. AlleCijfers.nl.
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LINKS Community Workshops (LCW's)

LINKS Community Workshops or **LCWs** can be considered a **means to fostering knowledge exchange within the Community**, which is in turn critical to the success of the project and for ensuring that emergency aid organizations are **made aware of the needs and possible hurdles in the community**.

Within the Dutch case setting, LCWs are **workshops aimed at improving the risk awareness of locals**. The primary goals are to inform citizens on what they should do in the event of a chemical incident, to clarify the responsibilities of Chemelot, the Safety Region of South-Limburg and the government. But to most importantly, gain **a deeper understanding of citizens' needs and experiences**.

During the workshop we actively search for solutions together. We note down all the feedback which we in turn use to improve our risk communication strategy going forward. Every workshop is therefore slightly different.

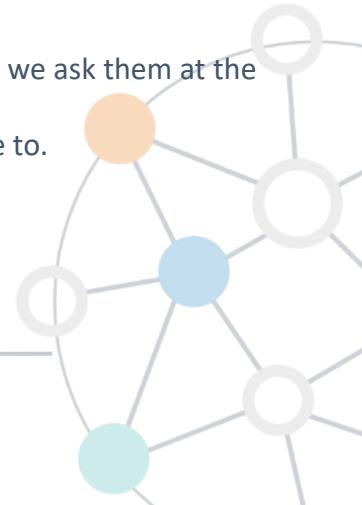
- Our goal has always been to apply a **personal approach to establishing ties and building (social) networks**.
- We hope to improve our risk communication strategy by tapping into the networks of our selected “key players”, we ask them at the end of the workshop if they wish to become ambassador.
- We believe that through ambassadorship, we can more easily reach communities we otherwise wouldn't be able to.



Find out more: links-project.eu



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LINKS Community Workshops (LCW's)

The original three target groups of our LCW's were: **healthcare facilities, schools and shopkeepers**. The LCW's have been such a success that we have been requested to organize more workshops by our partners and neighboring municipalities. Aside from the original three target groups we have gone on to organize many LCWs in the surroundings.



LINKS Community Workshops (LCW's)

- 1st LCW Healthcare institutions (10-05-2022)
- 2nd LCW Schools (21-11-2022)
- 3rd LCW Citizens - Lindenheuvel (20-03-2023)
- 4th LCW Citizens - Limbricht (21-03-2023)
- 5th LCW Businesses Beek (30-03-2023)
- 6th LCW Maastricht Aachen Airport (30-05-2023)
- 7th LCW Businesses Beek, Stein & Sittard-Geleen (12-05-2023)
- 8th LCW Shopkeepers (outdoors) (23-07-2023)
- 9th LCW Shopkeepers (chain stores) Urmond (23-10-2023)



Find out more: links-project.eu



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LCW: SCHOOLS



Find out more: links-project.eu



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LCW: SCHOOLS



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MAINTAINING RELATIONS

Keeping in touch with the ambassadors.

Participants from the workshops receive a newsletter with a summary of the findings from the workshop they attended. In the newsletter we emphasize again that we would like participants to become our ambassadors.

Furthermore:

- We keep a detailed list of our contacts.
- We are always available for safety information or assisting in creating or updating an organization's safety plan.
- We personally follow-up with those who request more information.



Alstublieft, de belangrijkste leerpunten uit de infobijeenkomst van november.

Allereerst nogmaals hartelijk dank voor uw aanwezigheid bij de informatieavond voor vertegenwoordigers van onderwijsinstellingen uit de omgeving van Chemelot. Het was een geslaagde, interactieve avond, waarbij we samen praktische tips hebben uitgewisseld. Hopelijk kunt u uw eigen veiligheidsprotocollen daarmee (waar nodig) verder verbeteren en bent u nog beter voorbereid voor het geval de sirenes afgaan.

Zoals beloofd bliken we in dit schrijven nog even terug op de informatieavond en benoemen we de belangrijkste leerpunten. En we kijken vooruit: want op basis van de waardevolle inzichten die wij als projectgroep hebben verkregen tijdens de bijeenkomst, willen we u in de toekomst graag verder faciliteren op veiligheidsgebied.



Tijdens de informatiebijeenkomst is gebleken dat vrijwel elke school zijn eigen veiligheidsplan hanteert en de meeste scholen hebben ook een BHV- of noodorganisatie. In het veiligheidsplan staan wel uitgebreide afspraken over het *uitruimen* (oftewel ontruimen in geval van een noodsituatie in het pand), maar over *inruimen* (wanneer de sirenes buiten



De informatiebijeenkomst maakt deel uit van het Europese onderzoeksproject LINKS, waarin risicocommunicatie centraal staat richting specifieke doelgroepen in de omgeving van Chemelot. Uw informatiebehoefte nemen we hierin nadrukkelijk mee en zullen we betrekken in de verdere communicatieprojecten die we rondom dit thema ontwikkelen.

Tijdens de informatiebijeenkomst is van uw kant de vraag gekomen of de Veiligheidsregio kan voorzien in een "e-learning", waarbij de belangrijkste handelingsperspectieven en praktische aandachtspunten worden behandeld. Wij zijn inmiddels een onderzoek gestart om te komen tot een dergelijk product. Uiteraard zullen we u op de hoogte houden van de voortgang van dit traject.

Andere initiatieven
Daarnaast zoeken we de komende tijd naar nog meer hulpmiddelen die we u kunnen aanbieden rondom het thema veiligheid. Zoals besproken tijdens de informatiebijeenkomst wordt door onze Italiaanse collega's gewerkt aan een digitaal lespakket rondom allerhande veiligheidsvraagstukken voor basisschoolleerlingen. Wij zullen die ontwikkeling nadrukkelijk volgen en bekijken of het zinvol is om dit lespakket te vertalen naar het Nederlands.

Other community building activities...



OTHER ACTIVITIES...

- We have had booths at local events.



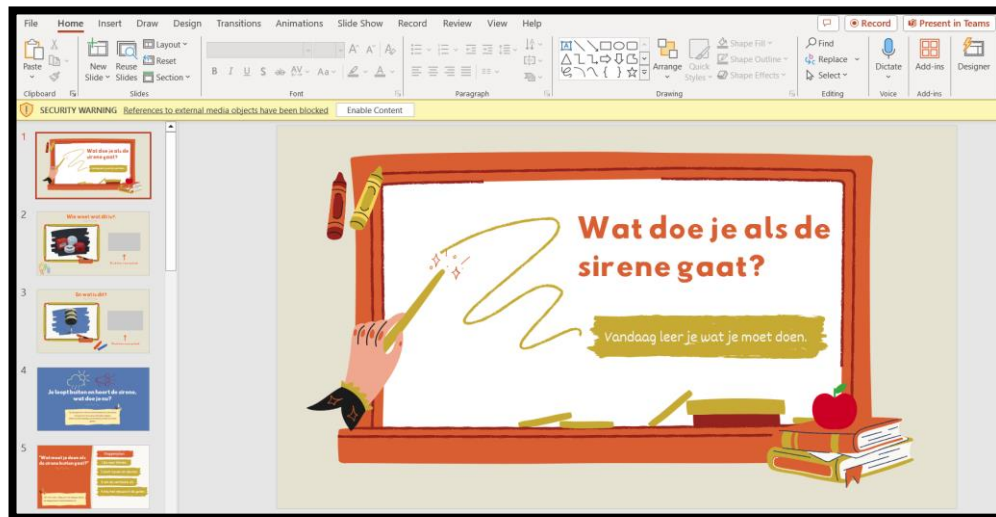
OTHER ACTIVITIES...

- We have personally visited store owners.



OTHER ACTIVITIES...

- We have taught at schools.
- We created a lesson for children on the topic of chemical incidents.
- We are currently creating a “kids emergency card”.



Thank you!

by Lieke Rijkx & Emmeline Roeloffs

