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Covid-19 Crisis-management in the Euroregion Meuse-Rhine

Study on lessons learned of cross border cooperation in the field of healthcare during the Pandemic crisis (study 1) Final Report



Maastricht University

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PANDEMERIC examines the benefits of euregional cooperation in the event of a pandemic or a large scale outbreak of an infectious disease. The project is financially supported via the Interreg Euregio Meus-Rhine COVID-19 call, by the European Regional Development Fund.



The Institute for Transnational and Euregional cross border cooperation and Mobility / ITEM is the pivot of research, counselling, knowledge exchange and training activities with regard to cross-border mobility and cooperation.

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1. Introduction

1.1 Background

This study focuses on making an overall inventory of experiences of EMRIC partners in the Euroregion Meuse-Rhine in crisis management during the Covid-19 crisis. In recent years energy, time and money was invested in establishing a structure for international co-operation in times of crisis. Now during the Covid 19 crisis an opportunity has arisen to analyse how the co-operation has worked out. The first impression before starting this evaluation was that national governments have focused on national measures to fight the virus and its impact, instead of turning to the cooperative structures developed in the Euroregion. The immanent importance of cross border co-operation calls for an evaluation to identify and analyse where this co-operation was successful; where it was frustrated and in which direction it may be optimised.

1.2 Aims and goals

The goals of the outbreak research are:

- Providing an overview of chronology of events and framework of agreements between EMRIC partners (structures; procedures; processes)
- Gathering impressions among key players in the region of how they experience the crisis management processes during Covid-19 and their specific role in it
- Making an inventory of cross border agreements, procedures and actions that worked, and or did not work
- Listing conditions that were either supporting or frustrating the developed agreements on how to cooperate in circumstances as occurred during the Covid-19 crisis
- Lessons learned on what cross border agreements, structures, processes, and activities are vital for the work of EMRIC with respect to a future pandemic crisis.
- Selecting themes and issues that will need further investigation in later stages of the study.

1.3 Methodology

In the context of the outbreak research the following activities were implemented:

1. **Literature/ document study** that forms the foundation of the remaining activities providing factual information on the chronology of events in the cross-border context, since the start of the crisis (national/regional and local measures; health situation; crisis response; and existing cross border agreements/ structures/ processes and activities) and existing cooperation arrangements and protocols in the context of EMRIC.
2. **Interviews** with relevant EMRIC partners and beyond. Those that were interviewed gained insight in how the crisis management evolved and how it might be optimised. Thus, it adds to the professional learning and increased resilience of all parties concerned. In total 20 interviews were carried out. with representatives of the EMRIC office; the seven core partners of EMRIC (GGZ Zuid Limburg; Veiligheidsregio Zuid Limburg (VRZL); fire department of the city of Aachen; Department for emergency services and disaster management of the StädteRegion Aken; The Ordnungsamt of Kreis Heinsberg; Dienst Hulpverlening en Noodplanning Provincie Limburg; The service of the governor of the province of Liège) and a selected number of services and governments that are involved in the EMRIC collaboration covering all three countries. **Annex 2** provides an overview of interview partners.

3. Two **focus groups** to discuss preliminary findings coming out the interviews, focusing on the lessons learned and which elements can be strengthened to better cope with a pandemic crisis in the future. For the focus groups we invited a selection of respondents interviewed. The second focus group took place on 1 September 2021, one day after the official project deadline that was defined for the INTERREG project. It was planned to organise this focus group in July 2021, but due to another crisis situation in the region, due to the water flood, participants – who were often members of crisis management teams - were not able to attend the focus group. Therefore, it was organised at a later moment, after the holiday season.

1.4 Structure of the report

The report starts with a description of the analytical framework in Chapter 2 that we used as analytical backbone for asking the right question to EMRC partners. Subsequently, in Chapter 3 an overview is provided of chronology of events and framework of agreements between EMRIC partners. Chapter 4 discusses the impressions among key players in the region how they experience the crisis management processes during Covid-19 and their specific role in it, following the analytical framework as presented in Chapter 2. Chapter 5, based on the findings of the previous chapters, provides perspectives for the future, for better dealing with a future pandemic crisis.

Annex 1 provides an overview of the chronology of COVID-19 measures introduced and Annex 2 includes a list with interview partners.

2. Analytical model for assessing the crisis response

The study makes an inventory of crisis management actions during the Pandemic and the specific role of EMRIC and partners. For this purpose, we make use of a framework developed by Boin, Overdijk & Kuipers (2014)¹. This framework identifies different components of a crisis response (recognition, sense making, co-ordination, communication, leadership, learning, accounting, strengthening resilience etc.) that we use as analytical backbone for asking the right question during the study (see table below).

Table 2.1: Analytical framework and related questions

Phase	Components of a crisis management response	Examples of questions
Phase 1: Problem identification and assessment	Task #1: Early Recognition What to look for: Did leaders create conditions that facilitate early recognition?	Did countries/ regions have synchronous processes of recognition of the urgency of the crisis? What was the health situation in the different countries? How was this information processed?
	Task #2: Sensemaking What to look for: Did leaders create, facilitate, and rehearse a sensemaking method?	How was the seriousness of the crisis perceived, what was seen as the way it would develop? What methods were used to interpret the situation (such as data and stakeholders/ expert consultation)
Phase 2 Organising the response	Task #3: Making Critical Decisions What to look for: Did leaders carefully deliberate which decisions they should make, and did they make the decision after some form of due process?	Did partners have a clear idea on how the co-ordination in this crisis would have to be established (including the cross-border component), what procedures would need to be followed in this particular incident (such as cross border agreements in the health sector; hospital cooperation; sharing of data; specific role of EMRIC and other partners)?
	Task #4: Orchestrating Vertical and Horizontal Coordination What to look for: Did crisis leaders monitor and assess forms of vertical and horizontal cooperation? Did they facilitate effective cooperation and intervene where cooperation was lacking or dysfunctional?	Was it clear who would have to be considered the immediate authorities and partners to be involved in mitigating this crisis?

¹ Boin, A., Kuipers, S., & Overdijk, W. (2013). Leadership in times of crisis: A framework for assessment. *International Review of Public Administration*, 18(1), 79-91.

	<p>Task #5: Coupling and Decoupling What to look for: Did crisis leaders actively monitor the state of critical (life sustaining) systems and the connections between them? Did they access expertise about these critical systems?</p>	<p>How did the perception evolve of who would be relevant other partners beyond the directly involved authorities and healthcare partners (educators, economists, psychologist, etc.)?</p>
<p>Phase 3: Communication with society</p>	<p>Task #6: Meaning Making What to look for: Did crisis leaders offer a clear interpretation of the crisis and explain how they intended to lead their community out of it?</p>	<p>How did ideas develop on how to inform people about the crisis and its longer-term narrative also in a cross-border context?</p>
	<p>Task #7: Communication What to look for: Did crisis leaders actively cooperate with their communications professionals to ensure they had timely and correct information for dissemination to the public?</p>	<p>How did partners get access to relevant information/data, from which sources, and how compatible were these data across organisations and borders, did the data allow for a common picture/dashboard?</p>
<p>Phase 4: Policy</p>	<p>Task #8: Rendering Accountability What to look for: Did leaders try to present a transparent and constructive account of their (in)actions before and during the crisis?</p>	<p>Have issues of accountability played a role in the international co-operation, if so, to what extent did these issues promote, or inhibit co-operation?</p>
	<p>Task #9: Learning What to look for: Did leaders allow for reflection on the effects of chosen courses of action, did they encourage and tolerate negative feedback, and did they record crisis management proceedings to facilitate learning by outsiders.</p>	<p>What did partners do during the crisis to reflect upon the way things went, and how did they adapt to new developments. What examples may be given of such reflection and reorientation processes?</p>
	<p>Task #10: Enhancing Resilience What to look for: Did leaders actively involve themselves in crisis preparations?</p>	<p>What ideas, or actions have arisen to anticipate the situation after the crisis, or to what extent have ideas crystallized on what the new normal may look like and how co-operation might be part of that future?</p>

Source: Boin, Overdijk & Kuipers (2014), Leadership in Times of Crisis: a framework for assessment

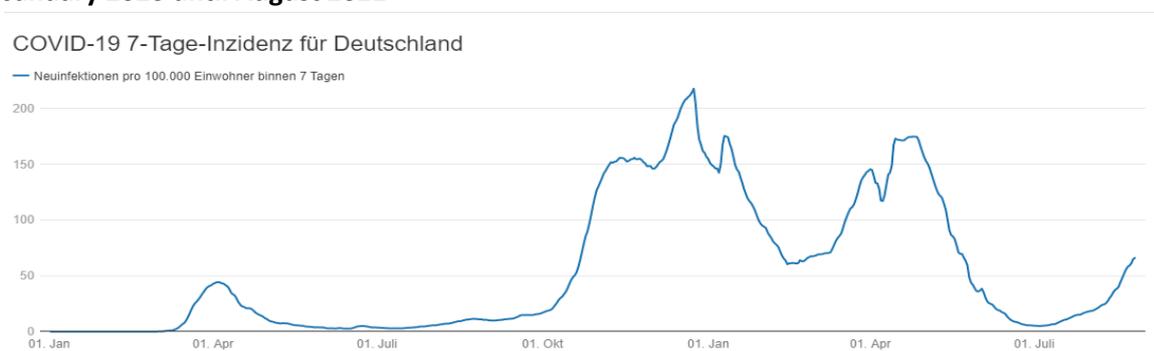
3. Chronology of events and governance models

This chapter describes the chronology of events that took place during the COVID-19 crisis and relevant Euregional cooperation agreements within EMRIC and beyond.

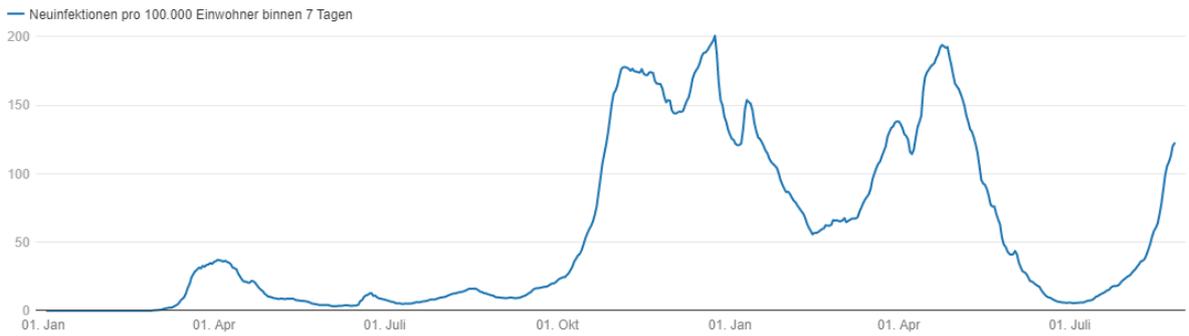
3.1 Chronology of the pandemic and related events

There are some significant differences with respect to the infection rate (measures by positive test results) and the different peaks in the different parts of the Euroregion Meuse-Rhin. The infection rate in Germany, and the same is true for the Land Nordrhein-Westfalen (NRW), peaked in January 2021 at around 200 positive tests per week and 100 000 inhabitants and another time in May 2021 again at around 200. Surprisingly, the numbers and the curve for North-Rhine Westphalia are more or less identical with the German average (see figure 3.1 below). Whereas the Belgian peak was already reached in October/November 2020 at around 1000 positive tests per week per 100 000 inhabitants. These numbers were exceptional high and are far beyond the dimensions we saw in the Netherlands or in NRW. Very different from the Belgian curve, that did not show another peak of this kind during the second and third wave, in the Netherlands there were three major peaks in November 2020, January 2021 and in July 2021 with all around 400 new infection per week. The Dutch situation was therefore characterized by significant up and down movements, whereas the Belgian situation – after the exceptional peak in later 2021, was rather stable with a smaller peak in April 2021. In general, the NRW numbers were during almost all the waves lower than in the neighbouring countries. The most striking result of a comparison of the different national and Euregional peaks is that even with some differences in the national infection numbers, the peaks in the different parts of the Euroregion Meuse Rhine follows the national trend rather than a trend for the ‘cross-border region’. National measures explain the trend of the infection rate at each side of the border, even though citizens – especially after the first wave when border restriction where lifted – did cross the border regularly for work, shopping or family visits (especially since there were practical exemptions in place that allowed a rather normal cross-border life during the second and third wave). As a result, the non-synchronization of national measures led to a non-synchronization of the infection situation in the Euroregion Meuse-Rhine. Even the extreme Dutch and Belgian peaks as shown in the graphs did follow the national trends.

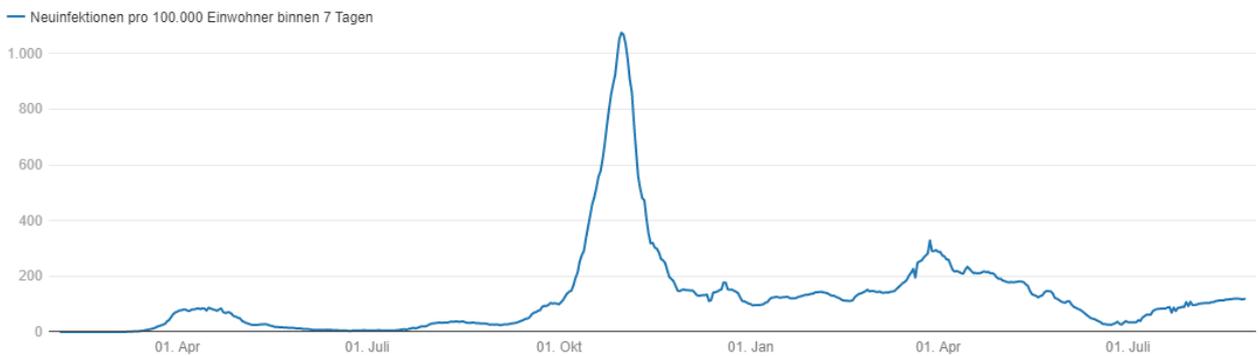
Figure 3.1: Covid – 19, 7-days incidence for Germany, NRW, Belgium and the Netherlands from January 2020 until August 2021



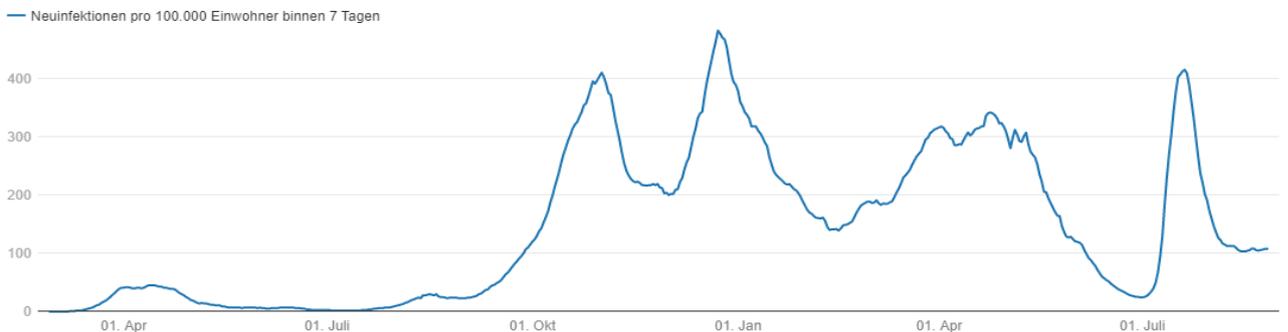
COVID-19 7-Tage-Inzidenz für Nordrhein-Westfalen



COVID-19 7-Tage-Inzidenz für Belgien



COVID-19 7-Tage-Inzidenz für Niederlande



Source: <https://www.corona-in-zahlen.de>

To get a better understanding of the different phases of the crisis, and measures taken, we follow in the first place the distinction of different epidemic waves. Since there is no official definition of consecutive “waves” with certain dates, we must come up with our own chronological description. In this sense, the different waves that we describe are the following and related to the statistical infection rates as presented. Even if the numbers of the national peaks were to some extent different in certain regions in NL, BE and NRW, the timing of the waves was rather similar. So, it is possible to describe them for the three countries or the five partner regions of the EMR (see table 3.1). Annex 1 provides more details about the chronology of national measures taken at each side of the border.

Table 3.1: The characteristics of different waves

	Period	Characteristics
First wave	March 2020-June 2020	Restrictions with respect to border mobility especially for the Belgian border. Establishment of national processes. First exchange of patients (ad-hoc). Establishment of Corona Taskforce at the level of ministries (NRW/BE/NL). Non-harmonization of national measures (timing closing shops, travel recommendations, enforcement, and fining rules). Solving some of the occurring problems and keeping the border mobility possible for cross-border workers (for instance in the health care sector), finally solving problems with respect to the cross-border mobility of families at the Belgian border and related to other cases.
Second wave	October 2020-February 2021	Avoidance of border restrictions. During the second wave, borders remained open, but neighboring countries took many non-coordinated restrictive measures such as mandatory recent negative test results, mandatory quarantines and travel bans or negative recommendations for non-essential travel across the border. The wave was also characterized by an exceptional peak of the infection numbers in Belgium that lead to a critical situation of intensive care capacities in the Province of Liège and to an ad-hoc exchange of patients from Eupen and Liège to hospitals in Belgian Limburg but also to Aachen. In the course of the wave, there was a mismatch of different rules on curfews, etc.
Third wave	March 2021- June 2021	Still non-harmonization of restrictive measures like compulsory negative tests for incoming travelers or quarantine rules. Mismatch of timing and legal framework of the rules. Mismatch of exemptions with respect to short trips (kleiner Grenzverkehr) across the border (24 h rule only applicable on the German side). Quarantine obligations were also introduced in the Netherlands. However, legally, quarantine enforcement was not regulated and enforceable until legislation was amended in June 2021. Lack of information for cross-border workers about rules when Germany made NL a high-risk area on 5 April, when problems around the costs of testing occurred. Downgrading of Germany from the Dutch perspective from a high-risk area to a simple risk area as of 10 June. Since 27 June, the Netherlands was no longer counted as a risk area from a German perspective. Later in July, Dutch opening policy did not match with German and Belgian restrictions and led to a quick fourth wave of infections at the end of July and again to a high risk country categorization of NL by Germany with stricter measures (quarantine, testing obligations). Dutch Infection rate falls quickly beginning of August and leads to an ease of measures from the German side.
Fourth wave	August 2021-	Numbers in BE and DE are slowly increasing at the beginning of August. Dutch numbers stabilize at the level of Belgium infection rates, Dutch downwards trend stops around 15 July. Infection rate in NRW rises faster than in the rest of Germany. Higher numbers at the

end of August on the German territory in the Euregion Meuse-Rhine compared to the Dutch territory.²

Sources: prepared by the authors

Table 3.2 provides an overview of the restrictions at the border during the first wave until June 2020. Because the different national pandemic-control strategies deployed different measures, the Euroregion Meuse-Rhine suffered mainly during the first wave an imbalance between the restrictions on free movement and the rights of citizens and businesses. While the entry restrictions were followed up by structural border controls in Belgium, this was not the case in Germany. While citizens who violated the travel restrictions were subject to fines in Belgium, they were not fined in the Netherlands and Germany.

Whereas at the political level, there was an early agreement between the Dutch government and the government of NRW to keep the border open and limit controls to a minimum, such an understanding was not found with the Federal Belgian government. Only at the end of the first wave, the Dutch and Belgian government agreed to avoid any closure of the border in the future.³

Table 3.2: Restrictions at the border during the first wave until June 2020

Indicator	NL	DE/NRW	BE
Number of days with border controls	0	0	87
Border closed for travel without a valid reason (in days)	0	66 ⁴	87
Closed borders: long traffic jams/waiting times due to border controls	To NL: no official border controls	To NRW: no official border controls	To Belgium: small local traffic jams when the controls started
Need for a commuter license	Entry NL: no	Entry DE: Not legally regulated, but a form was issued by the <i>Bundespolizei</i> (Federal Police) ⁵	From 22 March: entry and exit vignettes for cross-border commuters in 'vital occupations. Others: employer certificates (forms were issued)
Number of cross-border workers potentially affected by coronavirus measures	The Euregio Meuse-Rhine is one of the most integrated border regions in Europe. It numbers approximately 36,000 cross-border workers, including around 5,000 in the healthcare sector. ⁶		

Source: prepared by the authors

During the second wave, hard border restrictions especially at the Belgian border were avoided by agreements at the national level. However, neighbouring countries took many non-coordinated restrictive measures such as mandatory recent negative test results, mandatory quarantines and travel bans or again negative recommendations for non-essential travel across the border. The second wave was also characterised by the very different peak infection rate in the three member states,

² Positive tests per week and 100 000 inhabitants on 24 August 2021: Städteregion Aachen 107, Kreis Heinsberg 116, Kreis Düren 93, Zuid-Limburg 70, Province of Limburg (BE) 70, Province of Liège 100. Source: <https://www.coviddashboard.nl/covid-19-in-nederland-belgie-duitsland/>.

³ Belgian Minister of the Interior Pieter De Crem made this commitment after consultation with his Dutch colleague Ferdinand Grapperhaus (Justice and Security) on 13 July 2020. See: "De grens tussen Nederland en België blijft voortaan open bij een virusuitbraak", Trouw, 13. July 2020, <https://www.trouw.nl/buitenland/de-grens-tussen-nederland-en-belgie-blijft-voortaan-open-bij-een-virusuitbraak~b7530f74/>, retrieved on 26.8. 2021.

⁴ To guarantee German residents adequate protection against infection (by (re-)entering travelers), the German Federal Cabinet had already decided that non-essential travel was to be avoided, i.e. that non-residents could only enter Germany for valid reasons. Against this backdrop, all federal states - including North Rhine-Westphalia - issued state regulations on entry and return travel. The NRW entry regulation came into force on 10 April.

⁵ The Federal Police issued a license certificate on their website for employers to fill out on behalf of commuting employees. See: https://www.bundespolizei.de/Web/DE/04Aktuelles/01Meldungen/2020/03/pendlerbescheinigung_beruf_down.html, last accessed on 22 July 2020.

especially the exceptional high numbers in Belgium and on the Belgian side of the Euroregion Meuse-Rhine in November/December 2020. This led to real emergency situations in Belgian hospitals where cross-border solidarity was possible in an ad-hoc manner with the transport of patients from Walloon hospitals in Eupen and Liège to German hospitals in the Euroregion with the help of the EMRIC and EMR network. In the second wave, also few Dutch patients were transferred to German hospitals, but this was coordinated by the University Hospital in Münster, outside the Euregional cooperation network. According to Dutch news reports, Belgium had also asked at the political level whether Belgian corona patients could be admitted to Dutch hospitals. The report quoted Ernst Kuipers, the chairman of the Dutch National Acute Care Network (LNAZ), who said that due to the high infection rates in the Netherlands (at the end of October 2020) it was not possible to offer Belgian patients a hospital bed on a structural basis.⁷ On the other hand, Belgium also turned down requests from the Dutch authorities at a certain moment in time to accept COVID-19 patients for treatment⁸.

Also, the third wave was characterised by national measures that were not coordinated with respect to timing and detailed requirements. The situation was very often even more complex for cross-border workers and employers due to very late information about changing rules. This was the case for instance when Germany made the Netherlands a high-risk area on 5th April 2021. At the time, uncertainties arose with respect to the nature of tests, the appropriate location and the costs of testing for cross-border workers. A rather complex situation for citizens in the border region also arose later in July 2021. Dutch opening policy was not in line with German and Belgian restrictions and led to a quick fourth wave of infections on the Dutch side of the border at the end of July 2021. Again, the Netherlands was declared a high risk country by Germany with stricter measures (quarantine, testing obligations) which corresponded to the holiday season and led to uncertainties for people who had planned a cross-border travel. From August 2021 onwards, infection rates in the three countries aligned again, however, the situation where and when measures were lifted was still complex.

3.2 Relevant cooperation agreements, processes, and activities

With respect to emergency care and pandemic situations, there are hardly agreements or treaties between the three Member States or regional partners. This is very different to other fields where the network EMRIC is active. In the field of disasters and major accidents (e.g. accidents in industrial plants near the border), there are many existing agreements and treaties between the three Member States in question or the regional and local stakeholders in the Euroregion Meuse-Rhine. The basic understanding is the principle of solidarity, which means that in the event of disasters and large-scale incidents, the partners in the affected region or country where the accident takes place may not have sufficient capacities and may therefore need assistance. Both, at the national and regional level, several agreements have been concluded that make it possible to request assistance from partner organisations across the border.

The following list shows the complex picture of EU and bilateral arrangements that are relevant for the EMRIC partners in the Euroregion Meuse-Rhine.

Box 3.1: Agreements and treaties in the field of cross-border crisis management

European agreements and treaties:

1992 Convention on the Transboundary Effects of Industrial Accidents (Helsinki)

International agreements and treaties between the Netherlands and Germany:

⁷ See: <https://www.nu.nl/coronavirus/6086370/belgie-vroeg-nederland-om-coronapatienten-over-te-nemen.html>, retrieved on 26,8, 2021.

⁸ This information comes from the following source: Valérie Pattyn, J. Matthys, S. Van Hecke, High-stakes crisis management in the Low Countries: Comparing government responses to COVID-19, *International Review of Administrative Sciences* 2021, Vol. 87(3) 593–611, <https://journals.sagepub.com/doi/full/10.1177/0020852320972472>.

- 1988 Agreement between the Kingdom of the Netherlands and the Federal Republic of Germany on mutual assistance in combating disasters, including major accidents
- 1996 Agreement between the Government of the Kingdom of the Netherlands and the Government of the Federal Republic of Germany on the costs of assistance as referred to in Article 9(1) of the Convention of 7 June 1988 on mutual assistance in combating disasters, including serious accidents
- 2010 Agreement between the Technical Assistance Centre, Landesverband Nordrhein-Westfalen and the Safety Regions of Twente, Noord- en Oost-Gelderland, Zuid-Limburg, Limburg Noord, Gelderland Midden and Gelderland Zuid
- 2012 Adaptation to the 1988 Agreement between the Kingdom of the Netherlands and the Federal Republic of Germany on mutual assistance in combating disasters, including major accidents
- 2013 Agreement between the Security Region South-Limburg and the City of Aachen and the City Region Aachen on close cooperation in disaster and crisis management
- 2013 Agreement between the South Limburg Safety Region, the North Limburg Safety Region and the Heinsberg district on close cooperation in disaster and crisis management
- 2014 Agreement on the implementation of the Agreement of 7 June 1988 between the Kingdom of the Netherlands and the Federal Republic of Germany on mutual assistance in combating disasters, including major accidents

International agreements and treaties between the Netherlands and Belgium

- 1984 Agreement between the Kingdom of the Netherlands and the Kingdom of Belgium on mutual assistance in combating disasters and accidents
- 1990 First Additional Agreement for the implementation of the Agreement between the Kingdom of the Netherlands and the Kingdom of Belgium on mutual assistance in combating disasters and accidents
- 2006 Memorandum of understanding on cooperation in the field of crisis management with possible cross-border consequences between the Kingdom of Belgium, the Kingdom of the Netherlands, and the Grand Duchy of Luxembourg
- 2013 Agreement between the Safety Region South Limburg in the Netherlands and the Province of Liège in Belgium on the close cooperation in the field of disaster and crisis management
- 2013 Agreement between the Safety Regions of South Limburg, Limburg-Noord and Brabant-Zuidoost in the Netherlands and the Province of Limburg in Belgium on the close cooperation in disaster and crisis management
- 2017 Amendment to the Agreement between the Kingdom of the Netherlands and the Kingdom of Belgium on mutual assistance in combating disasters and accidents

International agreements and treaties between Belgium and Germany

- 1980 Agreement between the Federal Republic of Germany and the Kingdom of Belgium on mutual assistance in the event of disasters and serious accidents

Source: prepared by the authors/source EMRIC

The rather elaborated legal background in combination with a functioning coordination secretariat is one fundamental reason why, more than in other border regions, EMRIC constitutes a well-functioning network for cross-border emergency response (EMRIC)⁹. The different agreements on cross-border assistance during large-scale incidents and disasters have been developed by EMRIC partners. In the

⁹ This was for instance a conclusion of an ITEM study in the framework of b-solutions funded by the European Commission. See: Martin Unfried, 2019, Ambulances without Borders:

Towards sustainable cooperation between emergency services, <https://ec.europa.eu/futurium/en/pilot-projects/ambulances-without-borders-towards-sustainable-cooperation-between-emergency-services.html>, retrieved on 28.8. 2021.

so-called Eumed- and Emric plans, these agreements have been documented, for ambulance services (Eumed) and for fighting fires, technical assistance, and other incidents (EMRIC plan).

In addition, the agreements are filled with life, for instance with regular joined fire drills where fire brigades simulate accidents close to the border. This is also the case for the field of cross-border ambulance services. Before the Covid crisis, around 1000 ambulances within the territory of the Euroregion crossed the border to benefit from the geographical proximity of neighbouring hospitals. This is structurally done when neighbouring ambulances are closer to a certain location of an accident or to a hospital across the border than in the own territory. This practice is only possible against the background of the following national and regional/local treaties or agreements.

Box 3.2: Agreements and treaties in the field of cross-border ambulance services

Agreements between Euregional stakeholders (Netherlands and Germany):

2013 Public Law Agreement - Cross-Border Neighbourhood Ambulance Assistance between the Stadt Aachen as Träger rettungsdienstlicher Aufgaben, the Städteregion Aachen and the Kreis Heinsberg as Träger Rettungsdienste and the Geneeskundige Gezondheidsdienst Zuid Limburg

International agreements and treaties between the Netherlands and Belgium:

2009 Decision of the Committee of Ministers of the Benelux Economic Union of 8 December 2009 with regard to cross-border emergency ambulance transport (M(2009)8)
2012 Agreement on cooperation in patient care "Pediatric Intensive Care MUMC+" and "Pediatrics AZV"
2014 Financial regulation on the way in which the costs of the cross-border deployment of ambulances are charged (Articles 3 and 4 of the Decision)

International agreements and treaties between Belgium and Germany:

2009 German-Belgian Agreement on Urgent Medical Assistance/Rescue Service between the Federal State of Rhineland-Palatinate and the Kingdom of Belgium

National laws and regulations on cross-border cooperation:

2002 Advice on inclusion of Dutch hospitals in the Belgian list of hospitals with an approved specialised emergency care function
2004 Ministerial Circular of 16 June 2004 on the use of blue lights and/or special acoustic equipment
2004 Equipment and use of beacons for blue flashing light (rotating beacon) and of warning devices with a sequence of sounds of different basic frequency (emergency horn) on emergency vehicles of fire brigades, hazard prevention units and facilities and rescue services (Blaulichterlass NRW).
2006 Rules on the use of aircraft in the rescue service
2009 Directive on 'Cross-border communication in emergency medical assistance provided by Dutch ambulance vehicles in Germany and Belgium
2016 Act on Rescue Services and Emergency Rescue and Patient Transport by private companies (Rescue Act NRW - RettG NRW)

Source: prepared by the authors

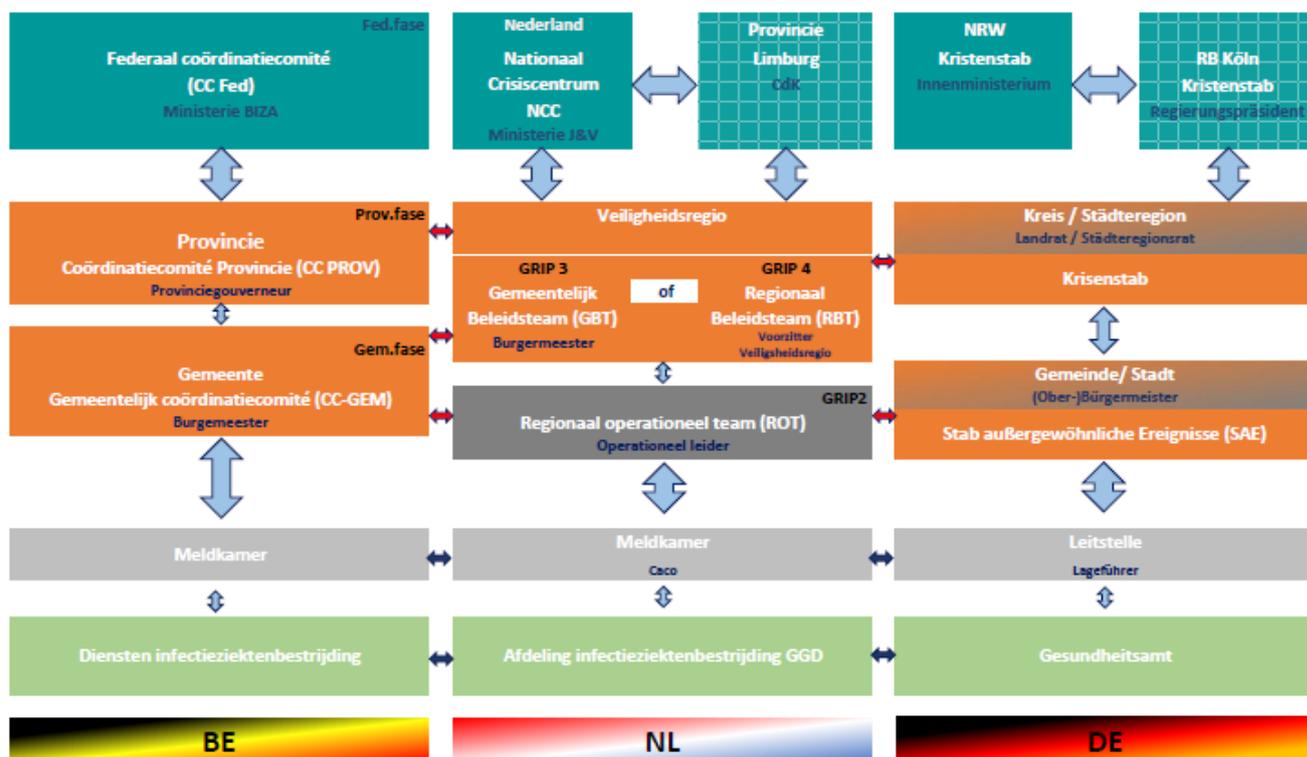
Even in the field of infectious diseases, there have been cross-border activities during the last couple of years and a special Focus Group was established under the framework of EMRIC. Regular meetings of physicians and nurses took place in recent years and there was a project (already 2013) that

produced a cross-border dashboard for infectious diseases.¹⁰ There are even cross-border agreements with respect to infectious diseases but not as elaborate as in other sectors. That comprehensive cross-border preparation is possible is illustrated by the fact that EMRIC regularly updates a plan for rescue services developed by all rescue services of the Euroregion Meuse-Rhine. In this plan, the responsibilities and capacities of the individual rescue services, as well as the distribution of casualties to the hospitals of the Euroregion, are recorded in the event of major accidents. Furthermore, control centres and management personnel on site find information how many hospital beds can be provided across the border and which structures for emergency treatment in the individual hospitals exist.

3.3 The Governance model: cross-border crisis management and the special situation of the covid-approach

In the Euroregion Meuse-Rhine competencies in the field of crisis- and disaster management are spread over multiple administrative levels in the three countries and respective regions. Because of the differences in the state structures, the allocation of responsibilities is rather complex. It is not easy for the members of individual crisis management teams to know who is the exact counterpart at the other side of the border. According to the experiences of EMRIC, this even results in an imbalance between the levels at which decisions can be made in the three countries.¹¹ Nevertheless, and illustrated by the impressive list of documents, EMRIC was able to come to operational agreements for cross-border assistance during large scale incidents and disasters (as shown above). The following graph shows the standard scheme of crisis management teams in the three countries.

Figure 3.2: EMRIC communication scheme in the case of a cross-border pandemic situation



Source: EMRIC/ITEM

¹⁰ According to EMRIC, regular Euregional meeting of the doctors and nurses of the infectious diseases focus group took place. In addition, the professionals alerted each other through a standardised cross-border reporting form about disease cases with a cross-border impact, concise diseases and (impending) Euregional outbreaks. See: EMRIC, <https://www.emric.info/de/professionals/themen/infektionskrankheiten>, retrieved on 24.8.2021

¹¹ See the description of crisis management structures by EMRIC <https://www.emric.info/en/professionals/themes-2/crisis-and-disaster-management>, retrieved on 24.8.2021

This organigram shows to some extent the “official” or normal responsibilities in a crisis situation and the communication channels. However due to the specificities of the Covid-crisis some of the elements were slightly different. This refers in the first place to the role of the Federal government in Belgium who was given a very strong role during the pandemic that even led to the exceptional decision by the Federal Parliament to give the minority government special powers for a period of three months.¹² Whereas in the first phase the Federal Security Council was convened under lead of the Prime minister, in a later stage the highest body that took decisions was the Consultation Committee (Overlegcomité, le Comité de Concertation). This is a body in which representatives of the various Belgian governments sit to consult and prevent or settle conflicts. The role of the local level was initially not that strong in Belgian crisis management that has led to various criticism already early in the first phase.¹³

In contrast, in the Netherlands, local autonomy played an important role in crisis management already from the start of the crisis in accordance with the role of the 25 veiligheidsregio’s (safety regions). These bodies – composed of the mayors of the specific geographical territory, had the competence to adopt regional regulations. One striking example in the Euregio Meuse-Rhine has been the closure of the Heuvelland (tourist destination between Maastricht and Aachen) for non-residents around Easter 2020. In this case, residents of Maastricht and Aachen were equally confronted with a territorial restriction that was not linked to the national border. The decentralized Dutch approach led to a sometimes-complex picture where measures were not always the same even in neighbouring cities. The approach was initially also characterised by the fact that the government did not formulate new legislation but took measures based on emergency ordinances. Only in December 2020, the temporary law on Corona (Tijdelijke wet maatregelen COVID-19) entered into force.

Despite the sometimes cumbersome decisions made between the Federal and the Länder level in Germany, encroaching centralisation, which would have been possible by the federal infection law (Infektionsschutzgesetz), was dispensed with the federal division of power between the Federal and the Länder governments.¹⁴ For the Landkreise (districts) and municipalities of the German part of the Euroregion, the measures that had to be implemented were linked to Länder legislation since the agreements between Bund and Länder had frequently been transposed into Länder law. Other obligations were formulated at the Federal level, as for instance travel restrictions for individual countries. Very early in March 2020 crisis management teams were activated at local and district level in the German part of the Euroregion. Due to the first outbreak on its territory during Carnival 2020, the Landkreis Heinsberg was the first German municipality that activated the crisis management team. These local crisis teams organise, for example, the work of the health department (Gesundheitsamt) of the Landkreis, compile all available information on the district area, evaluate it and distribute it within the district administration and to other important addressees in the district. Tracking and tracing is done at the municipal and district level, public procurement of medical equipment as well as informing the public about Covid measures. There was one element in NRW that was deviating from the normal crisis management scheme: at all levels of government (from the municipalities to the Bezirksregierung) the crisis management teams were established due to the statutory formula for crisis situation, except for the government of the Land. It was not the Ministry of Interior – as normal in a state of emergency – but the Ministry of Health who took the lead of the crisis management team. This was possible since the government of NRW did not declare officially the state of emergency

12 For a specific analysis of the Belgian crisis-management see: Valérie Pattyn, J. Matthys, S. Van Hecke, High-stakes crisis management in the Low Countries: Comparing government responses to COVID-19, *International Review of Administrative Sciences* 2021, Vol. 87(3) 593–611, <https://journals.sagepub.com/doi/full/10.1177/0020852320972472>.

13 See for instance the proposals to strengthen the role of municipalities in Sociaal-Economische Raad van Vlaanderen, “Handreiking: lokale besturen als motor van post-corona herstel”, 13 mei 2020.

14 See for instance: Nathalie Behnke, Föderalismus in der (Corona-)Krise? Föderale Funktionen, Kompetenzen und Entscheidungsprozesse, *Aus Politik und Zeitgeschichte*, (35–37/2020).

(Katastrophenfall). According to German members of diverse crisis teams this has led in the beginnings to some frictions.

One other crucial element of the Covid-crisis coordination was also not foreseen in the EMRIC scheme above. The early establishment of the Corona Taskforce in March 2020 led by the government of North-Rhine Westphalia brought together officials from different ministries from the Dutch, Belgian, NRW administration and officials from other two German Länder, Lower Saxony and Rhineland Palatinate. According to the responsible minister of European Affairs (NRW) Holthoff-Pförtner, the assignment of the taskforce was to share information quickly, synchronise activities and clarify issues of common interest for crisis management.¹⁵

¹⁵ See: NRW Landesregierung, Vorbildliche Zusammenarbeit in der Corona-Pandemie: Minister Holthoff-Pförtner trifft Bürgermeister und Landräte der Grenzregion, press-release, 24 August 2020, <https://www.land.nrw/de/pressemitteilung/vorbildliche-zusammenarbeit-der-corona-pandemie-minister-holthoff-pfoertner-trifft>.

4. Key findings

As indicated in chapter 2, for assessing the crisis response of EMIRC partners we used a model of crisis management, developed by Boin and Overdijk (2014). In this chapter the impressions derived from the interviews with EMIRC partners are described in the categories of this crisis management model. The model describes the crisis management as a process in four main phases, each subdivided in again a few components. However, in a crisis as long as the pandemic it is obvious that these are not just consecutive phases. Throughout the process of crisis management, the distinguished phase will be (re-) visited frequently. The process may be seen as an iterative process in which already while responding to the crisis conclusions may be drawn as to how to optimise the response, how to learn from the experience and how to prepare society for coping with similar and other crises.

4.1 Phase 1: Problem identification and assessment

This phase includes the assessment of (often still weak) signals and data that allow for early recognition of a threat that indicates or may lead to a crisis. Furthermore, this phase involves the interpretation of these signals to make sense out of them and allow for scenario thinking on how the identified crisis may evolve and how it may affect society.

4.1.1 Early recognition

Responding to questions on early recognition EMIRC partners said: ‘we were prepared for many things, but certainly not for a crisis this size and this long’. ‘We had our preparations and if the pandemic wouldn’t have grown so fast and so wide, we felt we were well on the way of making the things we had prepared operational. In the first day’s things proceeded along the lines we had agreed upon in our preparation, but then the National authorities took over. From then on, the focus of the endeavours changed from fighting the crisis itself to dealing with the consequences of national crisis management measures and with the incompatibilities of those measures across borders’.

Box 4.1: statement of one of the interview partners

‘We never expected a crisis that would last so long and have such an impact. We were prepared for many types of disasters and crises, for which we had developed, networks, of contacts, strategies, and protocols, but now we were facing new partners, and new challenges. Everything had to be done online. To some extent we had to find our ways in the midst of structures, networks, and policies we had not been aware of nor had worked with. EMIRC had always prepared for disasters referred to as either red (the work of fire brigades), of white (health care), but now we were facing a crisis with many and diverse players. During the pandemic the need to involve more experts from different backgrounds increased. Medical, psychological, economics, social, police, logistics, information management and communication experts were mentioned’.

All relevant parties, stakeholders, actors in the Euroregion were led into national crisis management strategies. Which brought new actors to the scene, such as national ministries of Interior, economic affairs, health and welfare, justice, and security, and complicated the Euregional role. This role shifted towards one of informing all relevant actors in the region. The active role in managing the crisis including the early recognitions had been taken over, or was to a high extent overruled by national, regional (NRW) and federal authorities, positioning the EMR and EMIRC in a reactive role finding practical solutions for the negative consequences of national measures taken on the cross-border region (‘managing the border’ and ‘explaining national measures to the general public’).

4.1.2 Sense making

Respondents indicate that there were no cross-border scenarios, and no shared models from which to derive conclusions on how the pandemic developed, nor on which to base decisions. Too few cross-border protocols existed, nor was there a shared dashboard, with compatible data based on agreed definitions and criteria (such as infection rate, mortality rate etc.).

Box 4.2: Nonalignment between protocols and the scope and nature of the Covid-19 crisis

‘Most of our preparations were based on the idea that if some parts of countries were damaged or at risk, professionals from other parts could come to rescue, assist, or support. But now we were all affected. National governments took the lead. We were no longer in charge. Only in dealing with the practical consequences of national decisions we played a valuable role’.

‘There was no plan for handling this kind of crisis. There is coordination between health services across border and over the years we invested in networks, communicating early warnings. Nevertheless, this concerned more classical examples of crisis management, like a school class that is visiting a theme park across border, of which a large group gets sick. The network is much focused on regular infectious diseases. In the past we did some emergency drills on how to deal with differentiation of vaccination strategies (tabletop simulation), but never thought this would happen. There was no planned approach or protocol to unroll’.

How little this area has been (legally) harmonised was illustrated by the problems that arose from the use of different monitoring systems by the EMR neighbouring countries. Each country had its own dashboard, used its own definitions, indicators, and criteria. In the beginning, Germany, Belgium, and the Netherlands used different counting methods for epidemiologist data, such as definitions of the number of infections and corona-related deaths. Countries also used the data differently as input for policies. The Netherlands much focused its policy measures on the status in relation to the number of Intensive Care Beds (ICU) occupied by COVID-19 patients, while Germany used data on incidence rates (since Germany has enough capacity of IC beds, just like Belgium, while the capacity is rather low for the Netherlands). Respondents even indicate that certain data, such as the number of occupied IC beds, was not shared anymore between countries at a certain time.

Consequently, national figures were difficult to compare in the border regions. Especially during the first wave, there was a lack of relevant data to assess the number of cross-border infections. This meant that Euregional actors were unable to use Euregional data to argue against entry restrictions¹⁶. In this light, it is not a surprise that there were no structured mechanisms for joint tracking and tracing of the disease and for identifying hotspots. This was done on an ad-hoc basis in the beginning and was facilitated by EMRIC’s regular information much better in the consecutive waves. Later, in the end of 2020, some data became available, as published by the foundation euPrevent that was mandated to analyse the cross-border dimension of the virus spread in the border region of North Rhine-Westphalia-Netherlands, and the border region of Belgium Limburg (see box below). Although this provided up to date information, figures were still not comparable to ground policy decisions. Also, the role of the European Centre for Disease Prevention and Control (ECDC) in monitoring epidemiologist data across borders was not always clear to the practitioners in the border region. The ECDC provided maps with notified cases and categorisation of countries with colour-based values, but these were not taken on board in the communication by countries, having their own thresholds (Germany for instance). And the ECDC numbers were not detailed enough for the regional and local level.

¹⁶ This was stated in many interviews with practitioners. EMRIC provided figures in its regular update, but the general problem was still comparability. Each partner used different means to get information about the situation on the other site, for instance the German Kreis Heinsberg analysed on its own Dutch dashboards.

Box 4.3: Improving statistics on virus spread across border

Corona research in the border region of North Rhine-Westphalia-Netherlands' (NRW-NL)

This assignment, awarded to euPrevent, focused on analysing the cross-border dimension of the virus spread in the border region of North Rhine-Westphalia-Netherlands, while the border region of Belgium Limburg was also included as a frame of reference. The main research questions to be examined were whether there are significant differences in the spread of COVID-19 in the Netherlands and North Rhine-Westphalia, and whether and how they are related to the different policy measures; whether the virus spread in the border regions is different than the spread domestically.

For the quantitative research, existing data sources were used, and various indicators were included, such as the number of people tested, number of infections, number of hospital stays, and number of deaths related to COVID-19. For the qualitative research, relevant experts in the border areas were interviewed. The two main results were a final report that answers to the central research questions, and formulated policy recommendations, as well as maps of the border area visualising the indicators that will be updated every two weeks as of March 2020.

Source: <https://euprevent.eu/corona-research-in-the-border-region/>

Not only the data showed incompatibilities, also the structures of crisis management in the countries were perceived as complex and difficult to attune. Governance structures differ. It is said to be difficult to find the right counterparts across borders in the Euroregion, and authorities involved. EMRIC, however, played an important role in sharing information, by means of regular bulletins on policy measures taken at each side of the border, however, without having a clear mandate. This information sharing was clearly appreciated by different counter parts, but this seldom led to shared analyses, such as a discussion on the impact of national measures on cross border regions, and common response to the situation, since countries all were caught into the policies and measures of their national authorities.

Box 4.4: Respondent statement on compatibility of structures

'Governance structures on either side of borders were different. Positions that at first sight seem to be similar, appear to have different mandates and competences. For instance, the counterpart for a Commissioner of the King in the Netherlands in Belgium is not the Gouverneur, but he inspector of public health care'

The overall impression is that after a brief period of only a few days of Euregional response, the national authorities took over and framed the crisis as a health and hospital capacity problem which had to be tackled per country. The Euregion thus was left empty handed. All partners in the Euregion were deprived of their authority to interpret and manage the crisis across borders.

4.2 Phase 2: Organising the response

Once the crisis is identified and to some extent understood, in a second phase of crisis management decisions will have to be made and measures will need to be coordinated and organisations and data systems involved need to be coupled and or de-coupled when needed.

4.2.1 Decision making

The border triangle between Germany, the Netherlands and Belgium is the place where the national crisis measures of three EU member states meet, presumably posing significant coordination challenges. In addition, given that the Euroregion Meuse-Rhine (in a geographical and political sense) includes parts of the Dutch Province of Limburg, the region (German: Land) of North Rhine-Westphalia, parts of the Belgian Regions of Wallonia and Flanders and the Belgian German-speaking Community, the regions play an essential role in 'regular' cross-border cooperation. This makes the cross-border territory extremely suited for studying whether the actors of 'regular' cross-border cooperation, who established even with EMRIC a specialized network for emergency cooperation and the cooperation of ambulances and hospitals, were able to play an important role in crisis management and how national coordination and top-down steering and regional cross-border cooperation did match.

As stated, national leadership overruled cross-border crisis management. This led to asynchronous and complex processes of crisis management. It was not clear where the actual management of the crisis at the border was taking place. Across borders it remained unclear who, at the political level, was authorised to co-ordinate the efforts of the partner regions in the Euroregion. Across borders political actors often didn't know their counterparts, nor their competences, or mandates (sometimes due to newly appointed public office holders) and direct communication was also hampered by language problems. It was stated in the interviews that initially the communication between the local stakeholders across the border was lacking. Measures were taken by national/regional governments and local stakeholders had no time or the capacities to inform or consult their colleagues for instance at the level of Dutch mayors, Belgian Governors or German Landräte/Oberbürgermeister.

Box 4.5 Limited cooperation at governance and political level

'Each country had their own strategy, some more centralised and other less centralised, but the national level took over. The national government of the Netherlands had its face towards the North Sea and it back towards Europe, was a phrase uttered in one of the interviews. Because of the national focus processes were not synchronous. Efforts will need to be invested in getting to know each other, in learning to appreciate and respect each other, and in elaborating ways to find each other and work together when needed. This is already accomplished to a high extent between professionals but still needs attention at governance and political level'.

There was no legal background that enabled cross-border solidarity. This can be seen as one of the fundamental problems of the network during the crisis and why there was no clear mandate for EMRIC when suddenly national top-down steering dealt with aspects as the allocation of patients to intensive care units. Also, the Euroregion as an organisation (EMR) was not consulted beforehand but could only try to signal the most relevant problems in the cross-border region to the national level. This was not only the case in the beginning, but it lasted throughout the duration of the pandemic. EMRIC gathered and distributed information to all relevant Euroregional partners, but there was no shared analysis, nor decision making at the government level (Taskforce). Governance networks were not synchronized. EMRIC basically is a network of professionals, not a governance network. Professionals however, managed to cooperate. They had shared plans, they had shared experiences in exercises, they had each other's mobile phone numbers etc. Political decisions however led to national approaches in which the needs of the Euroregion were neglected. The

differences in languages, culture, and especially the lack of clear protocols and cross-border crisis management structures hindered effective cooperation and decision making.

4.2.2 Coordination

From the start of the crisis, as indicated, it was not clear where crisis management should take place at the Euregional level, having a body with a clear mandate and capacities to coordinate the Euregional aspects of the crisis. This includes horizontal cooperation, with the counterparts at the other side of the border, as well as vertical cooperation with national decision makers.

Within EMRIC agreements exist on how to share, or exchange hospital capacity, materials, and patients. In the beginning of the pandemic patients were transferred to other countries when needed but later in the process, the national focus led to a solutions of capacity problems per country instead of across borders. Existing agreements were undermined for example by a national agreement that COVID patients are distributed over 11 Dutch hospital regions, coordinated by the National Coordination Center for Patient Distribution (LCPS). Patients from then on were spread in their own country instead of to places nearby across the border. Also sharing of equipment, testing centres, and hospital capacity was restricted during the pandemic. Several examples were provided during the study that there was an oversupply of material (such a face masks) in one country, while shortages exist in another, but materials were not shared. Similar examples are provided on the oversupply of test capacity at one side of the border, while at the other side shortages were identified. Nevertheless, informally equipment was shared between hospitals. In general, solidarity and coordination mechanisms were lacking across border during the Covid-19 crisis.

A joined Taskforce NRW/NL/BE was established (including experts from ministries), but this intergovernmental body can hardly be qualified as a crisis management team. In the first place, there was no legal basis for the taskforce and respective competences. Respondents also say that this taskforce did not lead to joint decision making and coordination of national approaches or dealing with frictions between national responses. It mainly served as platform for mutually informing colleagues across borders. There was no autonomy for the cross-border region to make own decisions, with some degrees of freedom (such as the case of the 'Veiligheidsregio' in the Netherlands). At the level of the EMR, the governing board met around four times during the crisis with the aim to inform each other about the developments in their regions, but a clear follow up or actions were missing.

Interviewees pointed out that it was difficult to get access to the national level, because of for instance the complex federal government structures in Belgium and Germany. Interviews pointed out that the national governments were not aware of or did not give (much) priority to the Euregional needs. The Joined Taskforce was, at a later stage, in contact with representatives of the Euroregion, who could signal problems at the border and discuss the implications of policy measures taken at national level. Information was collected from citizens, municipalities, police, social media and hotline, as well as the complaints and notification sent by citizens and organisation to 'grensinfopunten', that were bundled in one document. This information sharing was more ad-hoc than structured. Nevertheless, the EMR and EMRIC partners, who contributed to the work of the Taskforce, stated that the information exchange was certainly improved by the Taskforce, but did not lead to synchronisation of measures.

Members of the Taskforce also pointed out that there was certainly no mandate with respect to the harmonisation of national measures. This lack of horizontal and vertical cooperation, as well as the absence of a liaison officer from the Euroregion in the Taskforce, resulted that professionals at each side of the border had to improvise and find ways to deal with the differences, the inconsistencies and the incompatibilities of the National policies and measures in the countries concerned. Stakeholders interviewed indicated that the issues in cross border regions, and the EU as a whole, were not sufficiently considered.

While political coordination was not transparent, at operational level people were in touch (such as mutual informing about positive cases and follow up research of contacts by health professionals) and worked together to some extent. The professionals indicate that among them it was relatively easy to co-operate as they had built a strong professional network over the years and that they generally work according to similar professional framework. This network is the result of years of cooperation and of some relevant exercises and other training activities in which chain partners had gained experience in cooperating in a pandemic. Nevertheless, it was indicated that in the first wave it was difficult to keep the contacts alive and to inform each other, since (health care) professionals were overwhelmed with work, dealing with the crisis situation in their own country. This communication was also hampered since activities were scaled up, increasing human capacities for the contact tracing studies, involving new professionals not being part of existing cross border networks. Respondents indicate that everyone was taking care of their own tasks and worked in separated circuits, all extra reinforced by national measures taken. At later stage, when the peak period ended, there was time again for contacting each other and discuss solutions across border on ad hoc basis. At practical level, there were agreements and contacts about how to deal with positive cases and who takes responsibility for follow up contact tracing across border. What was striking to see is that no digital systems were available to systematically share information on positive cases and contacts across borders. Information was generally shared by phone and e-mail. Information sharing was also hampered by legislation, since according to the law health professionals are allowed to share cases across borders, but not the contacts for doing contact tracing search. Professionals indicated that similar challenges occur between regions within a country (such as between the 25 GHOR in each 'security region' in the Netherlands). Given the urgency of the situation, professionals decided to share this information between borders.

EMRIC practitioners and representatives of the Euroregion Meuse-Rhine interviewed also indicate that they were throughout the entire crisis occupied by the practical problems that were caused by the non-harmonisation of national/regional measures at the border (e.g. unilateral formulated exemptions to restrictions, non-harmonized curfew timing, testing requirements or quarantine rules for cross-border workers). In several cases EMR representatives played an important role finding solutions for unclear restrictions, such as related to (non) essential travel for professionals and proof needed. They also facilitated this process, by developing a "Crossing Borders" tool 2.0, that presents the rules as drawn up by the national and local authorities and translates them into practical situations. EMR was challenged by the fact that rules changed quickly. They were informed about new national Covid-19 measures at the same time it was in the public domain and had therefore limited time to reflect on the cross-border consequences of measures taken, and to translate these to practical solutions. In some cases, citizens were better informed about the recent measures taken

than professionals in the field (such as the police). Practical advice was also given to the police that needed to enforce compliance with new measures, such as how to deal with the restriction that a public bus in Germany was restricted to transporting a maximum of 12 passengers, while this was restricted to 25 in Belgium, leading to problems while crossing the border from Belgium to Germany. These problems needed direct solutions and EMR played an important role finding ways out.

EMR and EMRIC saw their main task in making sure that in the cross-border territory there would be an excellent exchange of information and consultation, and that there would be a tracking and tracing system that worked also fine across the border making sure that capacities in the cross-border region in the health sector could be used in solidarity to protect the health of the citizens. Below, a number of examples are provided in boxes related to problems for cross border workers, transfer of patients across borders, and family visits, caused by a lack of joined and coordinated decision making, for which solutions were found ((e.g. defining essential reasons for cross border commuting, sorting out test facilities for cross-border commuters, formulating exemptions to quarantine rules).

Box 4.6: Solving problems for cross-border workers during the first wave

Rather than the question of proactive cooperation of hospitals, exchange of patients or material, the coordination challenge during the first wave was to ensure the cross-border mobility of medical staff. The coordination for cross-border commuters including medical staff showed positive results. At no time were cross-border commuters affected by entry bans as the national travel restrictions in Germany and Belgium provided for exceptions for this group. Medical staff commuting across borders received particular support. In Belgium, this support came in the form of a special vignette, introduced to avoid the waiting times caused by the recent border controls. To what extent this vignette actually facilitated medical staff could not be assessed in retrospect. According to practitioners of EMR and EMRIC, a lot of their capacities went into the need to solve practical problems at the border due to non-harmonised national measures. In this respect, their contact with the Taskforce (led by the Staatskanzlei NRW), provided information about measures (very often at short notice) and allowed them to signal the most important problems at the border to the taskforce.

Box 4.7: Treatment of Dutch patients by German intensive care units

During the first wave several Dutch patients were treated in German hospitals in the German part of the Euregion but also in other parts of NRW (around 50). This was done based on an ad-hoc agreements by the Dutch government and the government of NRW and not based on existing cooperation structures and agreements. Also, for the second and third wave there was a general agreement coordinated at the Dutch national level and on the German side by the University Hospital Münster. Hence, the partner hospitals in the Euroregion were not in the first place in a position to exchange patients in accordance with the proximity principle. Meaning that patients from South-Limburg were also transported further north. During the first wave, no Belgian patients were treated in NRW/Germany.

Box 4.8: A blind eye on family visits during the first wave

While even during the first wave no Member State had internally curbed the rights of family members to visit each other (except those in hospital or in a care institution), such visits were indeed restricted for those living on either side of the border in the EMR during the first wave from March to the end of May. This had to do with the fact, that different from the situation of cross-border workers mainly the Belgian government did not exempt certain forms of cross-border family visits from the travel restrictions. Only a joint lobby campaign led, in particular, by politicians from the German-speaking

Community in Belgium and the secretariat of the Euregion Meuse-Rhine showed just how politically sensitive this inequality was in the border region. On 1 June 2020, after the Whitsun weekend, it became possible once again to visit family and go shopping in the neighbouring countries when the Belgian government adopted the respective exemptions.

Box 4.9: Treatment of Belgian patients in German hospitals during the second wave

During the second wave in October/November 2020 the intensive care units of the hospitals in Eupen and Liège were short of capacities to cope with additional patients. Since the situation also in other parts of Belgium was not better, there were attempts by stakeholders to reach out for Euregional solidarity. In this case, EMR and EMRIC were important stakeholders to make use of the existing relations with the hospitals in the Städteregion Aachen and finally patients could be treated across the border. However, also this was an ad-hoc exchange and not based on a structural agreement or defined plan that was formulated beforehand by Euregional stakeholder or agreed by national governments. Also, this case shows that exchanging patients across the border was from a national perspective seen as a “last resort” but not as structural element of coping with the Covid-crisis. It also shows how important existing cross-border networks are in times of crisis.

Box 4.10: Late information on testing and quarantine rules for cross-border workers during the third wave

Noticeable was how the introduction of obligations at short notice caused a lack of information and uncertainty among citizens and authorities alike. This in turn led to situations in which, as an example, cross-border information points (*GrenzInfoPunkte*) were unable to sufficiently inform border residents of which rules were in force and when. That was for instance the case when the Netherlands was classified as a high incidence area by the German government NL high as of 5 April and again as of 27 July 2021. In both periods, information for the public and especially for cross-border workers was given at a very late stage before new measures came into place. This referred to testing, registration or quarantine obligations. It was also difficult to find adequate information on governmental sites. There were situations, where even border information points and Euroregions were not able to answer to citizens and cross-border workers because of unclear communication. The Euregional stakeholders could signal the practical problems through direct access to the Taskforce, but delays in the provision of information repeatedly caused uncertainty.

The role of the European Commission was limited coordinating COVID-19 measures between Member States and dealing with the impact of measures taken in the Euregion. EU countries hold primary responsibility for organising and delivering health services and medical care, and therefore EU health policy therefore serves to complement national policies, and to ensure health protection in all EU policies. Nevertheless, a Council Recommendation was approved on a coordinated approach to the restriction of free movement in response to the COVID-19 pandemic. This recommendation proposes a common mapping system based on a colour code, common criteria for Member States when deciding whether to introduce travel restrictions, more clarity on the measures applied to travellers from higher-risk areas (testing and self-quarantine), and finally providing clear and timely information to the public.¹⁷ In practice, this did not lead to harmonised measures across EU Member States. The pandemic was not seen and phrased as European problem, demanding European solutions.

¹⁷ https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/travel-during-coronavirus-pandemic/common-approach-travel-measures-eu_en

4.2.3 Coupling, de-coupling

Throughout the process the pandemic cascaded from a health crisis into a complex crisis affecting various aspects of society. Gradually decision makers became aware of the necessity of involving other advisors than only health experts. Although the number of experts involved increased over time, still not all relevant experts are heard, or involved in the crisis management process (representatives of the private sector; economists, educator, psychologists were mentioned).

Box 4.11: expanding the sectors involved in crisis management

‘The complexity and the duration of the crisis revealed some differences between the sectors involved in crisis management. The fire brigade and the police may be considered organisations that have a defined and coordinated role in crisis management. However, this was different in the health sector in the Netherlands. There Medical Assistance at Accidents and Disasters, hospitals, Municipal health services and home practitioners all belong to different organisations. This made it difficult for this sector to be represented in one person. In future this co-ordination will need further elaboration. No single person can represent the whole chain of actors involved’.

In the interviews it was indicated that difficulties did not only arise in cooperation with regions across the border, but also with regions inside the own nation but outside the Euregion (such as the neighbouring security regions/ veiligheidsregio’s in the Netherlands that all had local autonomy in crisis management). These bodies – composed of the mayors of the specific geographical territory, had the competence to adopt regional regulations

4.3 Phase 3: Communication with society

The third phase of crisis management consists of the measures taken to inform society, to frame and explain the essentials of the crisis and to offer a narrative that gives a sense of directions and offers a perspective to citizens on what they might do to mitigate the crisis, or its consequences. Dealing with crises in the 21st century is more complicated than ever before. Arguably, the characteristics of crises have changed: from local incidents to transboundary disasters, from standalone crises to interrelated situations of misfortune, and most importantly, from sudden onset and temporal to creeping and enduring crises¹⁸. The current pandemic is an example underpinning this view. In Phase 1 of managing the pandemic the emphasis was on understanding the crisis to feed into the required decision making. In this third phase however, the emphasis is on informing citizens, to engage citizens and to share thoughts and ideas on what the crisis implies and what authorities, organisations and citizens may do to mitigate the consequences.

4.3.1 Meaning making

Framing the crisis and explaining it to the public also had become a national responsibility. In press conferences the national authorities informed the citizens of the respective countries, each in their own way at their chosen moments. This information often was not coordinated, measures were not attuned, and often contradictory leading to confusion and lack of action perspectives. No Euregional

¹⁸ Boersema, Kees, and Jeroen Wolbers (2021) Foundations of Responsive Crisis Management: Institutional Design and Information, <https://doi.org/10.1093/acrefore/9780190228637.013.1610>

narrative and guidelines were provided. Each country created its own narrative. Citizens living in the Euregion tend to be informed through the national broadcasting networks and through those of the neighbouring countries. In this situation it meant that the information given by one news network often was different if not contradictory to what another source communicated.

The same applied to the different dashboards developed by different countries. In each of the country's professionals felt they were doing a good job in bringing together the relevant data and by putting these data in a dashboard accessible to the public. Each dashboard served its purpose but together they radiated a bias in the communication. Citizens were confronted with separate national dashboards and communication graphs on infection rates and hospital capacities. No joined Euregional information and communication was given to the broader public no narrative of cross-border solidarity and crisis management was presented.

National governments appeared to have a blind spot for the synchronization of information across borders. Apart from this lack of Euregional attention at the national level, also the EU, the Benelux, the WHO and the ECDC were not making an effort to develop and share a joined narrative. The fact that a joined narrative was missing and the fact that the national authorities each developed their own communication strategies, inhibited the possibility to lead and coordinate the situation in the Euregion and left the partners there in mainly reactive mode, without a mandate, or the authority to manage the crisis, to be proactive and take the lead in managing the crisis. Nevertheless, attempts were made by EMRIC to have a joint communication to the citizens in the cross-border region (with translations in three languages). Moreover, a joint dashboard was developed for monitoring the number of tested persons and positive cases, but not all countries completed this dashboard with information.

4.3.2 Communication

At the operational level the exchange of information went well. Grensinfopunten (border information centres) played an important role in this. It was indicated that the website had around 2 million visitors since the pandemic started, that were looking for information on the consequences of the measures taken in the border region.

EMRIC was the spider in the web communicating to partners across border, but a small and vulnerable spider having limited inhouse capacity being depended on a few persons. Stakeholders as GGD and Gesundheitsämter had good bilateral information exchanges directly, or through EMRIC. As stated earlier the cross border political and governance communication was missing. In the region it was necessary to "repair", or solve the problems arising as consequences of national measures. The focus was on practicalities rather than on policies. Cultural differences between regions were said to hamper the communication.

Social media were faster than the official communications of the taskforce. This added to the feeling of lack of direction and control among crisis managers. Differences in data, data systems, dashboards blurred the communication. The speed differences between official communications and the social media added to the confusion that already arose through the strategical differences of the national communications involved.

Information was gathered and shared. EMRIC plays a major role in providing this information. However, no joint systematic analysis of information was done, no shared strategy on how to inform the public were made. Each country tried to solve the confusion the confusion that was generated by this lack of coordination of communication.

4.4 Phase 4: Policy

The fourth phase of crisis management focusses on three policy aspects. The first is accounting for the decisions made and the measures taken. The second concentrates on what may be learned from this crisis to optimize the way the crisis is managed while it lasts, as well as to improve the preparations for future similar, or other crises. The third aspect involves the societal resilience. It refers to the things that may be done in society to prevent such crisis to occur, or to be better prepared for its consequences of things cannot be avoided.

4.4.1 Accounting

To account for decisions made and measures taken it is important to have reference systems at one's disposal. These systems may be used to indicate what numbers of infections, what mortality rates, what capacity problems were considered when making a particular decision. The need to account for the actions requires figures about numbers, and reference models to justify measures against (indicators, criteria, limits etc.). Another reference is the cross-border comparison. However, no benchmarks were defined. No definition of "good cross-border crisis management" in a pandemic situation was available or made while the pandemic lasted.

As for the legal aspects things also proved to be difficult across borders. This concerned matters as data protection, but also the joined procurement of protection materials, and joined financing of tests and testing facilities. Other aspect of the crisis such as the economic impact and damage and issues of political responsibility are not regulated clear enough.

It is unclear whether negative effects may be expected in terms of changing attitudes of citizens and companies about cross-border work, cross-border business, or open border in general. Accounting for the decisions and the measures does not only refer to the health situation but obviously also applies to all other domains involved (economy; social; culture). Some studies (such as implemented by the Stadte Region Aachen) report on the negative social outcomes of the pandemic, pointing on the years of life lost, and mental and physical well-being of citizens.

4.4.2 Learning potential

The pandemic lasted long. This duration was said to be an aspect nobody had foreseen, nor prepared for. On the other side one might expect that the duration of the pandemic made it possible to optimize the response while fighting the crisis. And of course, throughout the pandemic politicians, experts, and professionals in the Euroregion did learn a lot. The exchange of information via EMRIC/EMR (briefing document on national measures) lead to better understanding at the technical level, but few explicit attempts were made to organise this learning in a cross-border setting, not even in between waves. The Pandemic online conferences were maybe a positive exception to share experiences and reflect together upon the course of events and the quality of the response. Still political stakeholders did indicate there were no significant milestones, turning points to be distinguished while the crisis lasted. The process of learning was evaluated as too poor; the efforts made to learn too low, except for the two Pandemic mini symposia mentioned. All people involved have invested loads of time and energy in everything they felt was necessary under the circumstances. This may have deprived people from the time and opportunity to make an explicit attempt to evaluate and learn from the crisis. In retrospect it is recognized that this might have needed more attention, in order to improve the quality and the synergy of the invested efforts, particularly where it concerns the cross-border coordination and finetuning.

4.4.3 Resilience in view of future crises

The practical consequences of the national measures and the problems these measures caused in the Euregion due to non-coordination of national measures have been tackled and solved, as best as possible. However general political and governance problems persisted. No clear centre of cross-border crisis management is defined in the Euregion. No ways were found to improve the vertical relation between the Taskforce and regional crisis management teams. Still common interests of the border regions are not priorities of national governments. Still national crisis management from a cross-border perspective is perceived as not sufficiently transparent and coordinated with the neighbouring countries. Still joined definitions, data, data systems are either insufficient or not fully attuned. Still the existing cross-border networks (i.e. hospitals) cannot fully benefit from their direct relations (i.e. exchange of patients, materials).

In the beginning of this chapter, it was explained that the phases of crisis management are not to be considered consecutive phases, but rather components of an iterative process. However the impression derived from the interviews held is that the last phase of the process, the policy phase, in which the crisis decisions and measures are accounted for; in which lessons learned are made explicit and are transferred into improvements of chosen strategies and actions; and in which an attempt is made to define what we have begun to refer to as the new normal situation, is indeed treated as a phase that still has to begin. A lot of work is done, many problems have been solved, but the role of the Euroregion has been reactive. Few explicit attempts were made to anticipate next developments, to train and prepare for that and to organise society in a way that will be able to cope with future crises. This is not only what the interviewers conclude, but also to a high extent what interviewees themselves in retrospect conclude.

5. Perspectives for the future

The overall picture of managing the pandemic is one of separate countries each trying to solve the pandemic in their own way, in their own country, in their own system, structure, and culture, with different levels of access to, and communication with national authorities. Apart from this each region involved in the Euregion, reports that the cooperation in the chain of organisations in one's own country went well. The signalled problems mainly refer to the international dimension which show a lack of coherence and a blind spot for cross-border interests.

The previous chapter ended with a section on resilience in view of future crises and that a few explicit attempts were made to anticipate next developments, to train and prepare for that and to organise society in a way that will be able to cope with future crises. During the study several perspectives were discussed that support the crisis responses in the Euroregion EMR in the future, and the specific role of EMRIC.

1. Need for a joined cross-border map and dashboard with common definitions for the Euregion Maas-Rijn

A general concern reflected by stakeholders was that different monitoring systems were used by the EMR neighbouring countries. Consequently, national figures were difficult to compare in the border regions since other definitions and measurements were used for infection rates, hospital capacities and more. Especially during the first wave, there was a lack of relevant data to assess the number of cross-border infections. This meant that Euregional actors were unable to use Euregional data to argue against entry restrictions. For future crisis it is therefore important to harmonise these monitoring systems, but also work towards harmonisation in interpretation of risk assessment and travel recommendations based on a certain threshold, in line with the Council recommendation on a coordinated approach to the restriction of free movement in response to the COVID-19 pandemic. This recommendation proposes a common mapping system based on a colour code, common criteria for Member States when deciding whether to introduce travel restrictions, more clarity on the measures applied to travellers from higher-risk areas (testing and self-quarantine), and finally providing clear and timely information to the public.¹⁹

2. Overview of national crisis management structures and updated inventory of relevant contacts

Each country has its own crisis management structure, not always compatible with each other. The study shows that professionals were not always well informed about this structure. Moreover, at political level persons experienced difficulties finding their counterpart at the other side of the border. Therefore, it is important to have a clear overview of national management structures and how these relate to each other. This should be completed with up to inventory of relevant contacts in each of the regions/ countries (including EU regional and national regions).

3. A crisis management structure, location, mandate and staff with a limited number of relevant experts and decision makers

From the start of the crisis, it was not clear where crisis management should take place at the Euregional level, since there is no official organisation having the mandate to coordinate such a crisis

¹⁹ https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/travel-during-coronavirus-pandemic/common-approach-travel-measures-eu_en

in the Euroregion. Each country has its own crisis management approach. EMRIC and EMR tried to play a mitigating role filling in the vacuum informing and advising governments and organisations at each side of the border, however, not with a clear mandate. Also, the Taskforce did not have a clear mandate coordinating the crisis at Euregional level. Stakeholders interviewed plea for more coordination by developing a Euregional crisis management structure that strengthens horizontal cooperation between crisis centres, with a clear mandate and staff, including liaisons officers that play an active role in each crisis management body, and crisis management experts. To strengthen the vertical coordination with national ministries, this Euregional crisis team should be represented in a future taskforce with national ministries, but preferable also have a mandate for coordination of national measures. This Euregional crisis centre should work on protocols and agreements to assure solidarity mechanisms in the border regions in next crisis, including protocols and agreements on:

- harmonisation of data, risk assessment, response measures, and travel recommendations (see also Council recommendation as presented above).
- exchange of patients, material, and medical staff in times of crisis, including rules for joint public procurement (if needed)
- joint communication strategy
- joined policy learning.

It should also work on a framework to assess further crisis measures on its impact on the cross-border region, based on the experiences gained during the pandemic, having an inventory of all practical problems encountered, how many people it concerns, and solutions found. Till now, it is not known how many citizens were affected in the cross-border region, not being able to visit family, work, go to school, having access to (social) services, and to care for other persons or animals across borders. Less is also known on the social effects of the pandemic in the Euroregion.

This joint crisis management structure could reside under the roof of EMR or the Benelux, including the NRW. It is recommended to establish a working group with relevant governance stakeholders across border to kick start this process, entering a dialogue how such a crisis management structure at Euregional level should look like, and discuss its aims, mandate, human and financial resources.

4. An empowered EMRIC unit to serve as information platform

The study reveals that the national perspective overruled the regional perspective. Mandates EMRIC has in less widely spread crises, now were overruled by the national governments. EMRIC played an important part in spreading and sharing information, but while doing so, it was confronted with problems of lack of compatibility of definitions, procedures and consequently with obstacles in the analyses of the collected data.

That is why we point out that there seems to be a need for further elaborate protocols of mutual information exchange. This requires agreements on the conditions under which data may be gathered, stored, and analysed and the ways in which these data will have to be anonymized or otherwise protected. This does not only apply to the way the information is brought together, but even more so where it concerns the ways in which and the groups to whom these data will and may be communicated.

Specific attention will have to be paid to indicators related to pandemics and other crises, such as indicators of incidence of infections or of people being affected by crises, and the criteria on when to intervene and in what way (see point 1 above). Cross border fine tuning of this will be required. If agreements cannot be reached still the implications of analyses in the participating countries will have to be made clear and understood.

5. A strengthened link between those involved in crisis management in different crisis domains

In the study it becomes clear that preparing for crises had taken place, but nobody had ever foreseen this kind of crisis. The consequence was that previously unknown partners and previously unknown networks got involved in managing this crisis. Networks tended to be rather crisis specific. Nuclear accidents, industrial emergencies, health crises and floods were mentioned as examples of crisis with each their own network of relevant actors. Often in reaction to crises many things are initiated to prevent such a crisis from happening again and if that is not possible to see to it that similar crisis may be fought in more effective ways. However, future crises tend to be other kinds of crises. That is why we hold a plea for elaborating networks that to a large extent (where possible) are involving crisis management experts and generalist and only where needed differential experts on specific disaster/crisis domains. This allows for more profound development of cross crises experiences and expertise. It creates more connectivity between actors throughout various kinds of crises. It will lead to mutual inspiration in co-creating solutions or management strategies to mitigate future crises. Crisis management will grow into a governance and professional community of learning able to elevate its level of performance in consecutive crises.

6. An expert data information management centre for crisis management

In crisis management, crisis communication and due to the increasing role of social media we see an increasing turn over velocity of data, of information, and of knowledge. This leads us to the idea that the speed and the complexity of data management, the assessment of the quality of the ongoing information and the monitoring of public and other news going viral, requires a further professionalisation of the information management. This implies investment in professional development, and specialisation of the people involved, but also investments in the hard ware and software needed to keep an eye on what is exchanged and control its consequences wherever needed.

These perspectives together require an integral approach to the further optimisation of cross border crisis management including:

- Mapping relevant networks
- Get acquainted, get to know each other
- Learn about each other's legislation structures and political context
- Elaborate these maps for different crisis domains but strive for overlap where possible
- Build experience in exercises and workshops
- Share elaborated ideas in wider circles of crisis managers and professionals
- Validate the built theories and concepts in evaluative studies and among all parties involved
- Create a community of practice to permanently keep on building further relevant expertise
- Share all previously mentioned elements in a flexible accessible common open web facility

Annex 1 Chronology of Covid-19 measures

Month	General	Contacts	Shops	Culture	Hospitality	Limits
Nov '20	DE (16/11; 25/11): increase in partial lockdown as of 2/11	Limit contacts to 10 people	All shops open Non-medical contact professions closed	Closed	Per 2/11: closed, pickup possible	20/11: Quarantine regulations suspended by NRW supreme court
	BE (27/11): stricter lockdown per 2/11	Limit contacts to 1 person Curfew 24:00 - 05:00 (Wallonia 22:00-06:00)	Non-essential stores closed Non-medical contact professions closed	Closed, outdoor parts of parks open	Closed, take-away possible until 22.00h, no alcohol allowed from 20.00h	Foreign travel is strongly discouraged as of 2 November
	NL (3/11; 17/11): partial lockdown, amplification between 4/11 and 19/11	Limit contacts to max. 3 persons, during amplification max. 2 persons	All open	Closed, only throughflow locations open (also closed during reinforcement)	Closed (except in hotels for guests), take-away possible, no alcohol allowed from 8pm	Recommendation for up to 10 days quarantine, except for cross-border work/study (per 11/11)
Dec '20	DE (2/12; 13/12): extension of partial lockdown as of 2/12, full lockdown as of 16/12 (Hotspot strategy)	Limit contacts to max. 5 persons from 2 families Public holidays: extension to 4 close relatives outside the household as guests	16/12: Closure of nonessential stores, takeaway allowed Non-medical contact professions closed	Closed	Closed, pick-up possible, only necessary hotel stays	From 28/12 onwards compulsory negative test for incoming travellers from risk areas, including exceptions of <24h, border commuters etc.
	BE (18/12; 30/12): slight easing of the strict lockdown per 1/12	Limit contacts to 1 person Curfew 24:00 - 05:00 (Wallonia 22:00-06:00) Public holidays: no exemptions	All shops open Non-medical contact professions closed	Closed, except for outside areas of parks and museums open	Closed, take-away possible until 22.00h, no alcohol allowed from 20.00h	Per 31/12 mandatory quarantine for inbound travellers who stayed >48h in red zone; test on day 1 and 7.

	NL (8/12; 14/12): full lockdown per 15/12, TWM per 1/12	15/12: max. 2 persons Holidays: extension with Christmas to max. 3 persons, not for New Year's Eve	15/12: Closure of non-medical contact professions and nonessential stores	15/12: closed	Closed (from 15/12 also in hotels for guests), take-away possible, no alcohol allowed from 20h	As of 14/12 negative travel advice for all nonemergency travel From 29/12: compulsory test for international public transport and flights/ships
Jan '21	DE (5/1; 19/1): aggravation lockdown per 11/1 & extension	Per 11/1: limitation of contacts to 1 person; possibility of limited movement up to 15km	Non-essential stores closed, pick-up possible Non-medical contact professions closed	Closed	Closed, pick-up possible, only necessary hotel stays	From 11/1 new entry rules; in principle 10 days quarantine (reduced to 5 with test). Test before or directly in Germany (two test strategy)
	BE (8/1; 22/1): extension of lockdown, non-essential travel ban as of 27/1	Limit contacts to 1 person Curfew 24:00 - 05:00 (Wallonia 22:00-06:00)	All shops open Non-medical contact professions closed	Closed, except for outside areas of parks and museums open	Closed, take-away possible until 22.00h, no alcohol allowed from 20.00h	From 27/1: temporary travel ban for nonessential reasons (traffic in border region is essential)
	NL (12/1; 20/1): extension of lockdown, increase per 23/1	Per 23/1: contact limitation to 1 person max. Curfew 21.00-04.30h	Non-essential stores closed Non-medical contact professions closed	Closed	Closed, take-away possible, no alcohol allowed from 8pm	Per 15/1: possibility for travelers to test on day 5 20/1: announcement quarantine obligation
Feb '21	DE (10/2): extension lockdown, some reopenings	Limit contacts to 1 person	Non-essential stores closed, pick-up possible Non-medical contact professions closed	Closed	Closed, pick-up possible, only necessary hotel stays	
	BE (5/2; 26/2): extension of lockdown, some relaxations	Limit contacts to 1 person Curfew 24:00 - 05:00 (Wallonia 22:00-06:00)	All shops open Non-medical contact professions closed, but hairdressers open as of 13/2	Closed, except for outdoor areas of parks, museums and from 13/2 onwards zoos open	Closed, take-away possible until 22.00h, no alcohol allowed from 20.00h	

	NL (2/2; 23/2): extension of lockdown, cautious widening per	Limit contacts to 1 person Curfew 21.00-04.30h	Non-essential stores closed, but with 'order and pick up' per 10/2 Non-medical contact professions closed	Closed	Closed, take-away possible, no alcohol allowed from 8pm	
Mar '21	DE (3/3; 22/3²⁰): extension of lockdown, some relaxations & introduction of Notbremse	Limit contacts to max. 5 people, from 29/3 to max. 1 person if Notbremse applies	Non-essential stores closed, pick up allowed and from 8/3 onwards also Click & Meet allowed 1/3: hairdressers and chiropractors open, by 8/3 all non-medical contact professions open (mouth mask or test) Per 29/3 both closed if Notbremse	By 8/3: many transit locations open, but theaters, amusement parks etc closed. Per 29/3 everything closed if Notbremse applies	Closed, pick-up possible, only necessary hotel stays	
	BE (5/3; 24/3): cautious openings for outdoors, tightening by March 27	Limit contacts to 1 person Curfew 24:00 - 05:00 (Wallonia 22:00-06:00)	27/3: non-essential stores only open by appointment and for click & collect Non-medical contact professions open by 1/3 (mouth mask) and again closed by 27/3	Closed, except for outdoor areas of parks, museums and zoos open	Closed, take-away possible until 22.00h, no alcohol allowed from 20.00h	
	NL (8/3; 23/3): extension of lockdown, minor changes	Limit contacts to 1 person Curfew 21.00-04.30h	Non-essential stores closed, but as of 3/3/ shopping by appointment is possible 3/3: non-medical contact professions open (mouth mask)	Closed	Closed, take-away possible, no alcohol allowed from 8pm	

²⁰ This is the final Bund-Länder decision on the course of action. With the federal Notbremse a legal framework has been given on federal level. The following dates are NRW decisions.

Apr '21	DE (26/4): Notbremse for Aachen per 6/4, for Heinsberg per 13/4; plans for vaccinated and tested persons; per 23/4 federal Notbremse	Limit contacts to max. 5 people, to max. 1 person if Notbremse applies Curfew between 22:00 - 05:00 by Notbremse	Non-essential shops open by appointment, except Notbremse Non-medical contact professions open unless Notbremse	Many flow-through locations open in principle, but closed due to Notbremse	Closed, pick-up possible, only necessary hotel stays	NL high incidence area as of 5 April
	BE (14/4): cooling-off package until 25/4 , travel ban expires on 19/4	Limit contacts to 1 person Curfew 24:00 - 05:00 (Wallonia 22:00-06:00)	Non-essential shops open by appointment, from 26/4 without appointment Non-medical contact professions closed, reopened as of 26/4	Closed, except for outdoor areas of parks, museums and zoos open	Closed, take-away possible until 22.00h, no alcohol allowed from 20.00h	The ban on non-essential travel expires on 19 April
	NL (13/4; 20/4): extension of lockdown, step 1 of roadmap as of 28 April (end of full lockdown)	Limit contacts to max. 1 person, from 28/4 2 persons Curfew 22.00-04:30h until 28/4	Non-essential shops open by appointment, from 28/4 without appointment Non-medical contact professions open	Closed	Closed, from 28/4 terraces open again 12:00-18:00	
May '21	DE (3/5; 15/5): relaxation for vaccinated and rehabilitated persons & introduction of Inzidenzstufes	Limit contacts to max. 5 people, to max. 1 person if Notbremse applies Curfew between 22:00 - 05:00 if Notbremse (mostly until mid-May)	Non-essential shops open by appointment, except Notbremse Non-medical contact professions open unless Notbremse	Depending on incident level, effectively mostly closed until the end of May	Depending on incident level, effectively mostly closed until the end of May	13/5: new Einreiseverordnung with exemptions for vaccinated persons NL no high-incidence area as of 30 May
	BE (11/5): presentation roadmap/summer plan	Limit contacts to a maximum of 2 people Per 8/5: no gathering between 0.00 and 05.00u	Non-essential stores open Non-medical contact professions open	Closed, except for outdoor areas of parks, museums and zoos open	8/5: terraces open 08:00-22:00	
	NL (11/5; 28/5): step 2 by 19/5 and step 3 by 5 June	Limit contacts to a maximum of 2 people	Non-essential stores open Non-medical contact professions open	As of 19/5: outdoor areas may be open	Terraces open, extended opening hours 06:00-20:00 per 19/5	As of 6 May 'border test General negative travel advice expires on 15 May

Jun '21	DE (21/6): Openings under Inzidenzstufes, changes to mouth mask requirements	Depending on the incident level, effective for up to 3-5 people	Non-essential stores open Non-medical contact professions open Unless Notbremse	Depending on the incident level, effectively many open (possibly with test)	Depending on the incident level, effectively many open (possibly with test)	
	BE (18/6): next step in summer plan per 27/6	Limit contacts to max. 4 people 27/6: max. 8 persons, no gathering ban	Non-essential stores open Non-medical contact professions open	9/6: reopening of many cultural establishments, also incumbent events	9/6: catering inside and outside open 05:00-23:30h, per 27/6 06:00-01:00h	
	NL (18/6): step 3 (end of lockdown) by 5/6 and step 4 (almost all open) by 26/6	Limit contacts to max. 4 people 26/6: no restrictions	Non-essential stores open Non-medical contact professions open	5/6: transit locations open, theatres etc. open 26/6: Open, with corona access ticket without waiver. Per 30/6 no event ban	6/6: catering inside and outside open 06:00-22:00 26/6: regular open with ticket without distance	From 1 June Quarantine obligation Act
Jul '21	DE (9/7): introduction Inzidenzstufe 0 with many relaxations as of 9/7	Depending on the incident level, effective for up to 3-5 people	Non-essential stores open Non-medical contact professions open Unless Notbremse	Depending on incident level, effectively many open remotely	Depending on the incident level, effectively many open (possibly with test)	From 27 July onwards the NL high-incidence area
	BE (19/7): maintenance of previous relaxations, reinforcement of travel controls	Limitations contacts up to 8 people	Non-essential stores open Non-medical contact professions open	Much open, or distance	Open, 06:00-01:00	Adjustment of travel measures as of 1/7
	NL (9/7; 12/7; 19/7; 26/7): repeal of some relaxations from 10/7, adaptation of travel policy	No restrictions	Non-essential stores open Non-medical contact professions open	Open, with rollbacks as of 10/7: events with seating, not festivals	Open, per 10/7 between 06:00 and 0:00	Recalibration of travel rules as of 1/7 27/7: change of travel advice to 'yellow' and obligation to provide proof for incoming travellers from risk areas

Annex 2 List of interviewees

#	Name	Organisation
1	Marian Ramakers	EMRIC; veiligheidsregio Zuid Limburg
2	Frank Klaassen	GGD Zuid Limburg; EMRIC steering group
3	Cindy Gielkens	GGD Zuid Limburg
4	Henriette ter Waarbeek	GGD Zuid Limburg & RIVM
5	Bernd Gessmann	Städteregion Aken
6	Marlies Cremer	Städteregion Amt für Rettungswesen und Bevölkerungsschutz
7	Werner Ziemer	De Ordnungsamt van Kreis Heinsberg
8	Bettina Gayk	Ministry of the Interior of the State of North Rhine-Westphalia
9	Daniela Giannone	Ministry of the Interior of the State of North Rhine-Westphalia
10	Dagmar Fierik	Ministry of the Interior of the State of North Rhine-Westphalia
11	Norbert Spinrath	Ministry of the Interior of the State of North Rhine-Westphalia
12	Michel Carlier	Dienst Noodplanning & Crisisbeheer - Provincie Limburg
13	Didier Sorgeloos	De diensten van de gouverneur van de Provincie Luik
14	Annemarie Penn- te Strake	Mayor municipality Maastricht
15	Michael Dejoze	Euregio Meuse-Rhine
16	Willemieke Hornis	Ministry of the Interior and Kingdom Relation of the Netherlands
17	Stefan Kupers	Provincie Limburg, the Netherlands
18	Stefan Storms	The Ordnungsamt of Kreis Heinsberg
19	Ralf Rademacher	The Ordnungsamt of Kreis Heinsberg
20	Sigrun Köhle	Bezirksregierung Köln

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