ANCCLI'S WHITE PAPER IX



THE **POST-ACCIDENT**: **ANTICIPATION AND PREPARATION**, AT THE HEART OF **CROSS-BORDER CLI** DISCUSSIONS



LA SÛRETÉ NUCLÉAIRE PARLONS EN !

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Préambule

In France, some recent regulatory changes (extension of the PPI, (Special Intervention Plan) from 10 to 20 km in 2016 and the inclusion of foreign representatives in the CLIs in 2019) make the cross-border angle of nuclear crisis management all the more pertinent.

ANCCLI and its cross-border CLI working group decided to focus on the cross-border issues of nuclear crisis and post-accident situations.

The CLIs of the following territories contributed to the insights which led to the recommendations set out in this White Paper: Manche CLIs, Gravelines CLI, Chooz CLI, Fessenheim CLIs, Cattenom CLI and Bugey CLI.

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INTRODUCTION

The status of accident and post-accident preparation in Europe

The Fukushima accident in 2011 woke European countries up to the need to test and improve existing measures for large-scale nuclear crisis management in Europe. Bearing in mind the cross-border nature of large-scale accidents, many public and citizen-level assessments have been carried out on a national and European level.

However, coherence between different national emergency plans appears to be lacking and there is too little coordination of information on both sides of the border. This is a weakness and of particular concern in Europe should a nuclear accident occur.

Actions to protect the population in the case of a serious nuclear accident differ significantly from one country to another, which could lead to major difficulties, particularly for facilities located near borders. In a joint meeting on 21 October 2014, HERCA (Heads of European Radiological Protection Competent Authorities) and WENRA (Western European Nuclear Regulators' Association) adopted a common position aimed at improving the management of emergency situations and cross-border coordination¹. The proposed cross-border coordination measures are currently being evaluated by several European countries.

Formation of a "Cross-border CLI" Working Group of the ANCCLI in 2013 in France

In France, local inhabitants are the main stakeholders in crisis and post-accident management, which is underscored by the Aarhus and Espoo Conventions. These conventions recognise that their cross-border participation in the crisis preparation and crisis management phases is a prerequisite for effective and efficient preparation.

It is against this backdrop that since 2013, with the support of the President of Cattenom CLI, the ANCCLI



Atelier du 11 février 2020 (crédit : ANCCLI)

created a working group to specifically deal with cross-border issues. This would allow the CLIs concerned (Manche, Gravelines, Chooz, Fessenheim, Cattenom and Bugey) to share good practices and bolster their relationship with their neighbouring countries.

In 2020, the group of cross-border CLIs of the ANCCLI wanted to spark discussion on the cross-border issues relating to managing the aftermath of a nuclear accident, with the aim of feeding into this White Paper and the recommendations within it.

^{1.} For a detailed description of this approach, see the following link: https://www.asn.fr/Informer/Actualites/HERCA-et-WENRA-proposent-une-approche-europeenne-pour-la-gestion-des-situations-d-urgence-nucleaire

COMMUNICATING IN TIMES OF UNCERTAINTY

In a crisis, the communication strategy (the transmission of information that is clear, truthful and credible for all) poses a major challenge as decisions have to be made in unclear circumstances, and the situation is likely to unfold rapidly. In cross-border context transmission of information become really complex due to disparity between countries' available tools and cultural differences which is not necessarily coherent from one side of the border to another.



In order to prepare to manage an accident and the fallout, it is important to anticipate the uncertainty of the situation and the

temporary absence of reliable data. For the inhabitants, it is first a question of understanding and accessing as much reliable information as possible, but also of accepting the uncertainty, interpreting the inconsistencies and consulting different sources.

Public authorities represent a vital, but not the sole, source of information. It is essential that the information provided by these authorities is clear and truthful. This does not mean it has to be flawless, but rather that it recognises mistakes and uncertainty. It also involves an ability to listen and exchange dialogue, particularly across borders.

"I think you have to be humble from the outset, recognise that the knowledge you have now may be in a continuous state of flux (as some experts did for Covid-19, but not all). It is important to communicate and make decisions based on the information you have at the time, but you run the risk of information changing the next day, based on new information being brought to light, which is why it's important to be humble from the outset."

"I don't know whether the pyramid principal (top-down approach) of communication would work in the current context. People today need to discuss ideas, give their opinion and take ownership of things in order to accept them."

"We can see that there are communication issues and we could open a can of worms by releasing a crazy PR strategy to convince the public of the truth. We know very well that that does not work. Feedback builds up one after the other. Building on this plurality means taking a different view of what it can contribute, particularly at the territorial and cross-border level". "If decision-makers want to restore public trust, they need to acknowledge their mistakes. They need to be able to hear what people on the ground have to say (...) Regaining trust happens by recognising mistakes in calculations and/or introducing real measures in the places these errors have been made and rebuilding measures in problematic areas."

"We need to help inhabitants see more clearly on a local level and in particular, have locally-elected representatives and some associations help disseminate information, so they can go back to the local populations and explain how the risk is limited by following instructions".

METHODOLOGY USED FOR PRODUCING THE WHITE PAPER

To facilitate discussions initiated by the cross-border CLI working group on cross-border issues and the management of the consequences of a nuclear accident, a multi-stage series of workshops was set up. To organise these workshops, the ANCCLI relied on methodological support from Mutadis. The original series had to be adapted due to Covid-19. In the end, it was rolled out as follows:

The first introductory workshop took place on 11 February 2020. This method is based on a multi-dialogue tool adapted to post-accident issues - the "PEP-PA" (Pathway Evaluation Process in post-accident context) - which allowed attendees to discuss in small groups the practical situations faced by people dealing with a nuclear accident and its aftermath. Based on these concrete situations, recommendations arose from the discussions. During this workshop, a PEP-PA test session was implemented. At the end of the meeting, the tool was validated with proposals to adapt it to the cross-border context.

On 14 April 2020, a questionnaire was sent to members of the group of cross-border CLIs. This document introduced 9 themes detailing a series of key issues and challenges to overcome relating to managing the consequences of a nuclear accident in a crisis and post-accident scenario in a cross-border context. The responses gathered were used to identify priority issues for members of the group of cross-border CLIs and to form the basis of discussion. Concrete scenarios were prepared, based on the themes the respondents considered to be a priority.

Between May and June 2020, 3 workshops were organised by video conference. Four or five members of the CLI participated in each of the workshops, i.e. 14 participants in total. An IRSN expert also participated in the discussions in each workshop using the PEP-PA tool. On 30 June 2020, a video conference meeting was held to present the findings from the discussions. The aim was to discuss and substantiate the results in order to allow the methodology team to draw up recommendations for the White Paper.

On 8 October 2020, the final feedback workshop was held by video conference. It brought together members of the group of cross-border CLIs. This meeting set out to discuss the draft White Paper and summarise the recommendations made during the workshops. After this meeting, the White Paper was updated to include content from the discussions and comments made by the members of the group of CLIs.

STRUCTURE OF THE WHITE PAPER

Beginning with concrete cross-border territorial situations, the working groups engaged in discussions of various kinds. First and foremost, some recommendations have a national (or international) angle which could be applied to all territories concerned (not just to cross-border territories). They provide the initial essential framework to allow post-accident situations to be dealt with effectively by local stakeholders. Specific cross-border elements were then added to these insights. The cross-border context increases the complexity of the consequences of a nuclear accident. However, upon closer examination, the cross-border dimension also means there are specific resources which can be mobilised, provided they are sufficiently well organised. This means relying on local actors, especially the CLIs, which may constitute a key stakeholder for preparing and managing territorial post-accident situations.

The recommendations were divided into three chapters:



Focus on Territorial Preparation

The preparation for managing the consequences of a nuclear accident takes place first and foremost at a territorial level. While the construction of a national management framework is a vital prerequisite, as local stakeholders have diverse territorial contexts, they have a major role to play in this preparation.

This first chapter provides a valid framework for all territories, even though specific issues arise in cross-border situations. Where appropriate, these are specified within each of the recommendations.

Specific features of territorial Management during and after an Accident

The need to reinforce the territorial dimension of a crisis within national preparation arrangements for crisis management and post-accident situations in France has been identified by the GPPA and the ANCCLI for many years. It is not just solely a question of bringing the national doctrines established by CODIRPA (the Steering Committee for managing the post-accident phase of a nuclear accident or emergency) to the territorial level.

Each territory should be given the means to develop territorial management of a crisis and postaccident situations, depending on their individual circumstances, based on resources and the leadership capacity of local stakeholders who are the prime experts of their territory. This would allow them to assess the practical implications of an accident and to prepare.

Recommendation 1 - Evaluate the practical implications of an accident, perform an inventory of the resources available in each territory

The consequences of a nuclear accident vary from one place to another. The complexities of managing it increase in a cross-border situation. It is therefore advisable to start this territorial preparation work by identifying the resources available for each territory and by evaluating the implications for each territory. This stock-take process is not routinely performed today, but is the starting point for implementing real territorial preparation.

"As most people are unaware of the postaccident management division, they think that the consequences of an accident will be managed by those who were responsible for it."

"Following the logic of preparation, it would really be worth asking questions such as, if we were forced to stop a particular activity or completely evacuate the area, what would we do and how? Or even, if we were forced to stop supplying other areas, how would we organise ourselves?"

"Inhabitants need to be informed of the impact of a nuclear accident in advance and to be given scenarios of what they should do in a crisis. We need to be able to test these scenarios so that the people concerned can be informed. For example, in the event of a crisis, what happens if you need to close your business with immediate effect? And what if you need to evacuate? What can you do and how can you do it safely to avoid further accidents?"

"It is already difficult to talk about the postaccident situation during an exercise, whether cross-border or locally on French soil. So it's unrealistic to broach the subject of the future of waste at the moment."

"*Tm* not sure anyone has even considered radiation protection for road users travelling in a warning zone."

"We know that there are risks but we haven't created a model to try and understand how we will be affected. What happens if it ends up covering a very large area? What if we have to evacuate the whole island of Guernsey?"

"If the territory provides solutions that work for everyone, we can manage the complexity of the situation."



Recommendation 2 - Preparing territorial management of nuclear accidents, a key factor for the long term resilience of territories

Local preparation is vital in order to anticipate and create relationships of dialogue and trust between the national (international in a cross-border situation) and territorial level. Territorial preparation is an opportunity to build resilience in territorial communities over the long term. This is an important resource for territories, not just within the context of nuclear accidents. Preparing to manage an accident also constitutes an opportunity to work on the practical areas of the territorial presence of nuclear activity. This work can, for example, be carried out as part of preparation exercises addressing specific concrete problems in each territory.

"CLIs have been discussing preparation for years right in front of us, without really listening to us."

"Trusting each other requires preparation, it requires getting to know each other, but that can't be done in 6 months, it takes years."

"There is something at stake in our discussion and that is the territoriality of nuclear crisis. We get the impression that the crisis measures available are ready to go and will just need to be applied everywhere, but in reality, we can see very specific territorial problems emerging."

"The territorial angle of crisis management is an issue which is often overlooked, as the planned measures are very national and international-focussed, and the standards intended to regulate the situation are designed with the implicit goal that everything will return to normal. But returning to normal does not just mean the absence of radiation risk; it means everyday life returning to normal, going about your usual activities and the ability to make a living, etc."

"We need to anticipate reactions. It seems to me that they will be more local than you can imagine in everyday life where many things in France, a very centralised country, can be managed from Paris. With a nuclear crisis, you can't ignore geography."



"Am I wrong by saying that in today's exercises we are light years away from discussions generating between neighbouring authorities (regions, territories, countries) along the lines of the following: if have we SOmany contaminated territories. decontaminate dowe everywhere? How much

soil do we need to scrape? What will we do with the decontaminated soil? Is there somewhere to store it?"

"Territorial anchoring is something I've really become aware of during the Covid-19 crisis."

"It is a huge challenge preparing for a serious accident. You have to ask practical questions, like where will the decontamination issues lie? What does that mean in terms of radioactivity? What will be done with the waste? What are the possible scenarios? Can they be discussed in a cross-border context? Can we not identify where to store the waste in advance?"

"Our general preparation, regardless of the crisis, is quite incomplete at the moment. For locally elected representatives, territorial preparation would be useful in itself. It would be a kind of investment, working on collective decision-making, which would be of interest beyond the preparation phase, by allowing us to imagine another way of living together."

"On the subject of territorial preparation, there are perhaps the challenges of making territories resilient for the future and building networks of key stakeholders before a crisis occurs. Without this, it is obvious that D-day, particularly within a crossborder context and inhabitants left to their own devices, will create a perfect storm, which runs the risk of being very difficult to manage."

"There is a question of community resilience in our inhabitants, which is not yet there. Up until the 1990s, our nuclear preparation consisted of using an airborne warning siren which dated back to the Second World War. When there were bombings, people were alerted so they could seek cover. The sirens have been dismantled, so we don't even have those anymore."

Non-radiological issues to put at the heart of the preparation process

Radiation protection is a major issue when it comes to preparing for nuclear accidents. However, nonradiological, economic and social aspects appear to be essential factors in territorial management and the root of several delicate situations (as the COVID-19 crisis has shown). These non-radiological elements do not appear to have been taken on board, or if they have, not enough. Yet they are fundamental to managing the aftermath of a nuclear accident and should therefore be placed at the heart of territorial preparation.

Recommendation 3 - Anticipate all lifestyle challenges when preparing to manage the consequences of a nuclear accident

Several aspects which are considered in practice peripheral elements of healthcare (economic impact of the accident, the territorial anchoring of inhabitants in the affected area, etc.) need to be included in preparation measures (and more specifically in post-accident preparation). It is therefore important that they are identified as part of territorial preparation.

"The post-accident phase involves using logic which is not solely focused on radiation protection".

"Many aspects considered in practice as slightly peripheral (relating to healthcare protection), mainly in the crisis management phase (but also in the post-accident phase) will later become the most important issues. There are many other things at stake than radiation protection and to build cohesion we need a concerted effort, and to not just focus on radiation."

"In the post-accident phase, everyone will have to create their own tailor-made solution. At the time of a crisis, the urgency forces us to prioritise the most important radiological risks. As soon as radioactivity starts to reduce, other parts of life will be taken into account."

"We won't be happy with just complying with the radiological exposure standards and saying that is enough just because high-level experts tell us so. When it has such a big impact on everyday life, it is harder to be satisfied." "When people talk about a nuclear accident on paper, you imagine that the aim is to return to normal life (in terms of exposure to radiological risk). If we take the example of Covid-19, you start to realise that there is an enormous difference between how we viewed the crisis at the beginning in terms of things returning to normal, and what we are experiencing today. Life is returning to a "semi-normal" state, but in no way resembles life before the pandemic."

"From the moment we find ourselves in a situation where there is a serious disruption to living conditions, where decisions are made which have a huge impact on people's lives, their attachment to their land, where they live, their health and their children, they realise that these decisions are neither black or white. They are dealing with a challenging and complex situation with competing priorities which may be mutually exclusive. In this situation, it is necessary to seek a wide range of opinions."

RECOMMENDATION 4 - MAKE ECONOMIC IMPACT A KEY CONCERN FOR MANAGEMENT

Economic issues are an essential component in preparing to manage crisis and post-accident situations in all territories (practical preparation in companies, anticipating disruption in logistical supply chains, managing the flow of people and goods, particularly in the cross-border context, etc.). They need to be identified in order to take them into account, otherwise several problems can arise. Radiological logic needs to be combined with economics, which is complex and requires increased preparation and territorial management.

"In the post-accident phase, very contradictory logic takes over and negotiation is required. Difficulties will arise in society's reactions to the economic issues at stake."

"When dealing with the crisis and aftermath these days, the economic angle is not sufficiently taken into account, which is a powerful factor in decision-making."

"During the exercises, they are only concerned with radiation protection. This clearly demonstrates that, until now, economic issues were not taken into account as much as they should have been."



"There is a need for in-depth cooperation and significant preparation. Only protection decisions have been made, but there are also issues around maintaining essential activities and mitigating the short-, mediumand long-term consequences. I imagine that if companies are forced to permanently close, it will be very difficult for them."

"Helping evacuate the inhabitants is not necessarily easy, but it is feasible. Relocating an entire industrial estate, on the other hand, is completely different."

"We need to examine our supply chains. If there is an accident, how would it work if entire countries are dependent on these supplies?"

"Regarding the flow of goods and people, the Opal Coast is located on a European corridor (a multi-modal traffic route). As these accident-related issues have repercussions over time, could they not be submitted to European corridor management committees for discussion, so they can begin thinking about creating alternative routes to the geographical area which may be affected by disruption to the flow of goods?"

"There is an issue around maintaining activities in slower conditions. It is not black and white, whether you can stop or carry on. There is a whole grey area which needs to be examined to see how we can allow these activities to continue somewhat, by implementing adapted radiation protection techniques."

POST-ACCIDENT GOVERNANCE TO SUPPORT TERRITORIES

Post-accident governance is based on one observation. During the Fukushima accident, as with Chernobyl, local initiatives were taken from the moment the crisis struck, but it was during the postaccident phase that the inhabitants had a major role in managing the long-term consequences of the accident.

Merely implementing top-down, decentralised rules in no way responds to the complexity of the post-accident situation in a territory. It needs to be based first and foremost on the initiatives of local stakeholders and inhabitants, and to be fully integrated into post-accident governance measures in a positive way. Furthermore, in the case of cross-border communities, specific issues will add to the general considerations on territorialised postaccident management.

SUPPORTING TERRITORIAL INITIATIVE IN THE POST-ACCIDENT PHASE

The management of post-accident situations must go hand in hand to support territories preparation. This means clarifying which stakeholders are responsible during the post-accident management phase. Furthermore, local initiatives should be included in the decision-making process by providing appropriate measures and resources which allow them to be implemented. Integrating local initiatives into these systems will also mean that coordination between different decision-making levels will have to be adapted accordingly.

Recommendation 5 - Define a delegated responsibility framework to facilitate local INITIATIVES

The key question of who is responsible needs to be clarified, i.e. who is in charge of what and within what legal limits? This would make it possible to strengthen delegation, coordination and management between the different levels of decision-making and enable local stakeholders to provide a suitable response for the inhabitants in the affected territories.

Incorporating territorial initiatives into management measures is key to creating the necessary longterm trust. It is often perceived to be a problem, whereas it is actually a source of solutions for making difficult trade-offs between different approaches arising from the post-accident situation (radiation or non-radiation focussed).

It is worth changing the top-down approach of post-accident management (from national authorities to territories) and creating an appropriate framework aimed at bolstering local initiatives. This would reinforce their relevance and mutual support, allowing them access to the necessary resources to implement measures.

In the cross-border context, delegation is even more important as contamination does not stop at administrative borders. There therefore needs to be coordination between local initiatives of neighbouring countries.

"With the Covid-19 crisis, we saw that the role of the State gradually became less important than that of communities, particularly mayors, who increasingly took on board the opinions of citizens. This redefined the roles that they could play in a post-accident situation, i.e. we can see that after a certain point, it is the inhabitants who take control of their way of life."

"If the mayor or parents decide to decontaminate schools so they can reopen and classes can continue, what happens if children end up contaminated later on as there were hot spots in the playground or along the path that were not discovered during the decontamination process?" "The more initiatives are left to a local level, the more they need to be within a clear and well-defined framework."

"In the cross-border context, it will be difficult to say that it 'affects everyone' (as the Covid-19 crisis). With a nuclear crisis, a whole wave of liability issues will come into play."

RECOMMENDATION 6 - INCLUDE LOCAL INITIATIVE IN POST-ACCIDENT MANAGEMENT

Local effort has a major role to play in the management of post-accident situations. It is worth considering governance measures which recognise their relevance in complex situations, where each group of stakeholders needs to create tailored solutions and make the necessary trade-offs appropriately.

Acknowledging this means adapting coordination between the different decision-making levels to allow them to be effectively and seamlessly incorporated into the whole post-acccident management process.

"Should local leadership necessarily be viewed as a source of problems? Is it not possible to imagine ways that local leadership can successfully make a positive contribution to post-accident issues?

"We need to successfully coordinate between different levels. If people have an idea for an initiative (e.g. decontaminating the school their children attend), and if it is a reasonable idea, they should be provided with the means to follow through with it and receive support from State services, rather than the discussion being shut down by order of the prefect."

"If you take the example of reopening schools in France, people need to realise that this involves mayors who are responsible for school buildings, the State via the prefect, the national education system (also the State: the principal, school directors are important stakeholders). During the Covid-19 crisis, when some schools had to reopen, we saw clearly the extent to which school heads felt responsible for what happens in their classrooms. It was the same for local mayors responsible for their local areas and for parents of students who felt just as concerned and responsible!"

The three month period (following the crisis) can be used to allow State services and competent services (IRSN, ASN) to inform local authorities (I'm thinking particularly of mayors who are territorial stakeholders on the ground) of the action to be taken if they need to implement any initiatives of this kind."



RECOMMENDATION 7 - PROVIDE RESOURCES TO SUPPORT TERRITORIAL EFFORT

Supporting these initiatives involves planning resources (financial reserves, facilities, intermediaries, etc.) to be made available to local stakeholders to enable them to deploy and manage the effect of an accident on their territory in the short, medium and long term. It would be worth anticipating the processes to allow local actors to gain access to these resources.

In a cross-border context, the provision of resources for territorial preparation and post-accident management may involve applying for European public funds, such as Interreg funding. With this in mind, cross-border CLIs and the ANCCLI may seek support from the European Committee of the Regions.

"I imagine that there will also be a question around resourcing. To implement these local initiatives, we will need the means (measuring equipment, site equipment, procedures to protect the people involved, etc.). This needs to be thought about in advance."

"We need to learn from what we have just experienced with Covid-19, and anticipate the practical issues, such as who pays for masks? Who provides the doctors' scrubs?"

"If there is a nuclear accident, we are going to

get into hot water because there will immediately be rhetoric like 'we'll send your waste back to you'. Or even, 'we have arranged compensation', but who is going to pay for it?"



"In a cross-border context, maybe one country should try and liaise with their neighbouring country (where the accident occurred) to see how they can provide assistance, even if they can't help with all the waste, but just some of it."

"The discussion on cross-border management of waste resulting from decontamination policies should not take place when lorries full of waste arrive at the border or when the affected countries start mass decontamination activities on their territories. It has to be thought about in

> advance. You can't leave it to when bags of waste are being loaded onto lorries to decide where to put it."

THE CROSS-BORDER CONTEXT: A SPECIFIC CHALLENGE

The Covid-19 crisis has made people aware of a specific cross-border problem: which standards should be followed on both sides of the border? What common strategy should be adopted? Or conversely, why set off in different directions and based on what criteria? Implementing specific lines of cooperation for facilitating cross-border dialogue should be considered.

The initial feedback also encourages us to put in place a common regulatory framework on a European level, in order to facilitate arbitration in cross-border management. This could serve as a reference point for approaching other types of technological accidents.

RECOMMENDATION 8 - IDENTIFY CROSS-BORDER RESOURCES IN THE EVENT OF AN ACCIDENT

Beyond the additional challenges caused by the cross-border situation (differences in standards, authorities' different approaches to radiation protection, etc.), formal and informal resources emerge from cross-border areas which had not necessarily been thought of at a national level. For example, during the Covid-19 crisis, hospital beds were made available in one region for a neighbouring country to use.

The cross-border angle should therefore be considered a complementary resource. Several actors with different skills and resources can be mobilised to find short- and long-term solutions. That being so, prior and continuous coordination is vital in order to effectively implement these resources. This means that in advance of the accident, an inventory should be made of the resources available (human skills, equipment, etc.) and regularly updated.

"With Covid, it became apparent that the cross-border dimension was more of a resource than a problem."

"Where we are, there are two large Euroregions where healthcare cooperation started where it didn't exist before. We could never have imagined before this that that patients could be transferred as quickly as they are. In a nuclear crisis, people may need to be admitted to hospital. This should not be ignored in terms of territorial anchoring."

"The cooperation angle is important, both beforehand and on an ongoing basis. There are two types of cooperation: voluntary cooperation (such as the Covid example between Alsace and Baden-Württemberg which had spare intensive care beds) and institutional cooperation, which makes it possible to involve many decision-making levels. New regulations provide for the presence of cross-border authorities within CLIs, which is a step in the right direction as it allows institutional dialogue to take place outside of the context of an accident." "For radioactive waste, preparation can be made in advance, particularly on crossborder CLI territories. Storage sites can be found which are jointly approved by territories in advance, while waiting for a definitive State-to-State solution to be agreed. Territories would be able to define sites that could be managed during the temporary storage phase."

"Isn't trust in a region's products inherently a regional and cross-border issue? Has this important question been grasped today, for managing the post-accident phase? Wouldn't it require very specific coordination? As with others, this issue needs cross-border specifications to be compiled."

RECOMMENDATION 9 - FACILITATE DIALOGUE AND CROSS-BORDER COOPERATION BY AN INTERNATIONAL COOPERATION

The terms of international cooperation in the event of an accident should be put in place to promote cross-border dialogue and prevent blockages between countries. An international cooperation framework is required, as some issues will not be able to be handled between cross-border local authorities, due to reasons of sovereignty or national sensitivity.

Conversely, the systematic intervention of inter-state decision-making levels would pose a real hindrance to post-accident cross-border cooperation. An appropriate framework should therefore be drawn up on an international level to make cross-border cooperation efficient and responsive.

It is also advisable to create an international cooperation site to facilitate cross-border dialogue, which can be used to discuss delicate issues requiring arbitration.



"When all is going well, borders don't exist, but a crisis redraws them into the landscape."

"In the case of Covid-19, it's a bit of "eye for an eye, a tooth for a tooth". Sometimes the State closes its borders and then another one does the same in response. It feels like there hasn't been much cohesion between European countries."

"The issue of waste produced from decontamination should be managed on a country-to-country level, but territories have their own role to play in the sense that they can identify temporary storage sites." "Local stakeholders cannot solve everything. These issues are between countries and it is not up to local or national authorities to solve them. These issues need to be addressed at a national level between governments, but they should also be raised on a European level, to the Commission or the Council."

"In this case, the cross-border context makes me think that there should be dialogue at a level above the two countries. What is the best way of bringing two countries to the table? These countries have always been neighbours. They know each other and work together. Perhaps they are members of the same Schengen area, of the European Commission. So there is already a forum where they can hold discussions. Is this the best way?"

"The issue of waste from remedial policies is an extremely complicated problem if there are no political provisions in place beforehand between the countries impacted. We need to have an agreement at a higher level that anticipates this kind of situation."

The Euro-regions or Euro-metropolises can be used to identify where this cross-border preparation can take place. It is a question of using existing cross-border cooperation models (the European Community of Alsace, European metropolises of Lille or Strasbourg, etc.) to consider how they can avoid the frontier effect of national policies. One option could be to continue to pool existing resources in a post-accident management situation in a cross-border territory, as well as the logistical elements required for dignified living conditions.

As a fully trusted third party of the territory, cross-border CLIs can use this as a driving force for a long-term dynamic, by facilitating discussion on the inter-regional post-accident phase on either side of the border.

"Before we can even broach the subject of cooperation, it is vital that we identify the relevant levels on both sides of the border, including relevant information, cooperation and decision-making levels. Obviously decision-making channels are not all the same across France, Germany, Belgium and the United Kingdom."

"There is a benefit to having good coordination between elected officials on both sides of the territory. It might be beneficial to not compartmentalise too much and to have places where they can discuss what can be done in the event of conflict, including preparation and what could be made available to take these kinds of initiatives."

"Institutionalising cross-border cooperation in the nuclear and health fields seems like a good idea to me. If it hasn't already been done, I think a working group should be set up on the subject between territorial political bodies or between prefectures."

"It is vital that there are meetings between the inhabitants of both sides of the border to take stock of the situation, but it is not up to them to come up with solutions. They are the victims of both the situation and the accident, so it is up to the authorities to deal with the aftermath. In my region there is a body known as "Euro-metropolis", where there are common rules of operation with the neighbouring part of Belgium and there are commissions with elected representatives from both countries. The Euro-metropolis could ensure cross-border waste management by implementing common rules. They could also set up a new commission in the event of a nuclear accident."





RECOMMENDATION 11 - POOL TOGETHER TERRITORIAL STAKEHOLDERS TO DRAW UP A PROPOSAL FOR A EUROPEAN DIRECTIVE GOVERNING THE MANAGEMENT OF THE CONSEQUENCES OF A NUCLEAR ACCIDENT, NOT JUST THE RADIOLOGICAL ASPECTS

The work carried out as part of this White Paper could be the first step towards a process aimed at bringing the issue to the attention of European authorities and proposing implementation of regulatory texts to govern post-accident management, which are not solely focused on the radiological aftermath.

To encourage such a directive, it would be appropriate to coordinate action at a European level with other territorial stakeholders. The ANCCLI could take on this initiative with the support of the European network Nuclear Transparency Watch (NTW). The Aarhus Convention & Nuclear dialogue initiative, a partnership between NTW and the EC Directorate-General for Energy, could also be somewhere to take this initiative.

"A directive on assisting with the consequences of a post-accident situation could be a path that civil society could take."

"A cross-border White Paper could be a first step, but the ANCCLI and the NTW could propose that the Commission prepare the ground for legislation. This could be planned a long time in advance and would imply major cooperation."

"Up until now we were talking about a situation in which Europe had no mandate. In the field of agriculture, it has a clearlydefined one. Why not request a solidarity intervention fund to standardize different types of compensation?"

"The European and worldwide discovery of vulnerabilities struck me. With the Covid-19 crisis, we were faced with a climate of vulnerability which opened the minds of elected officials and inhabitants to what vulnerability really means and a problem that has never arisen before. This situation means that through this cross-border White Paper, we can take on board the European angle. European countries have been very much involved in economic support during *Covid. In a nuclear crisis, we must also bear* in mind people's experiences, i.e. the lives of territories people in the concerned. particularly regarding flow the and transport which crosses those territories."

PLURALITY AS A RESOURCE FOR MANAGING THE POST-ACCIDENT SITUATION

CLIs, at the heart of territorial preparation for post-accident management.

Just as territorial stakeholders bring together a plurality of views, CLIs have an important role to play in territorial preparation for managing the consequences of a nuclear accident, particularly by making inhabitants aware of the issues at stake in the postaccident phase. In a cross-border context, because of their interterritorial angle, CLIs are granted particular legitimacy to lead on territorial preparation (particularly regarding new regulations), which is not limited to a national context.

Recommendation 12 - Initiate territorial preparation with support from CLIs and ANCCLI

Among the multiple stakeholders involved in the territory, CLIs can make local actors aware of the issues linked to consequences of a nuclear accident. They can play a key role in initiating territories' preparation processes, aiming to effectively tackle the long-term management of a nuclear accident. The GPPA and ANCCLI, in coordination with the group of cross-border CLIs, can be a support structure for CLIs in implementing such a territorial process.

"Perhaps we need to deepen the work we have begun with the group of cross-border CLIs. There is a permanent post-accident group at the ANCCLI level. Why not bring these two groups together with the common objective that CLIs take charge of the post-accident issue and raise it in the field? This seems really important to me. The Covid-19 crisis shows that accidents can happen. It is not just a nightmare that might occur, but a potential reality. It's good that the White Paper is coming out this year."

"After the next municipal elections and the reorganisation of the make-up of the CLIs, there will automatically be an elected representative, an expert and an association from each border country. This will allow discussions to emerge on cross-border management and why not put practical topics such as the ones we have discussed on the CLI agenda?"

"We cannot control what governments do, but we can act locally with associations, citizens, work with experts and organisations to raise examples that work well and maybe afterwards governments would feel less alone and by telling themselves that people are aware, that people know about CLIs because messages are getting across and the educating is done." "If people at different levels get into the habit of reflecting on these issues, including by using territorial resources, e.g. CLIs, it would provide a pool of capable people who would be useful in a post-accident situation, even if the issues arising are completely different."

"Cross-border CLIs have a role to play in changing the mentality of different countries due to their experience and knowledge of neighbouring countries, by pooling everything together to produce an action plan."

"As part of a cross-border decontamination policy requiring storage of harmful waste, particularly radioactive waste, what CLIs could do is plan ahead by identifying potential storage areas which will not pose a harm to the population or the environment."



Visit of IRSN's technical centre of crisis (credit : ANCCLI)

RECOMMENDATION 13 - PROMOTE CITIZEN ACTION AS A DRIVER FOR BUILDING TRUST : AN EXAMPLE **OF TERRITORIAL INITIATIVES**

The development by CLIs of initiatives to develop tailored citizen and pluralist training appears to be the first path to take to promote better understanding of issues raised in nuclear accident situations.

This understanding could be an asset to establishing trust between stakeholders in post-accident management mechanisms. These initiatives should be designed in conjunction with the education system (approaches to secondary schools and collages/sixth forms) or viewed as training offered to citizens so they can make use of these tools, participate in studies and understand changes in measures and their value in a post-accident situation.

In a cross-border context, CLIs are particularly well placed to propose, test and implement tailored systems involving the living areas of inhabitants on both sides of the border (data comparison and interpretation, citizen mapping of the radiation situation, etc.).

"Underneath citizen action lies the important question of society's contribution to mapping the radiation situation. This appears to be quite an important issue, and all the more so in the cross-border context."

"Why not put in place mechanisms which allow citizens to feed into systems of measures. It's not that complicated."

"I think that in the context of post-accident management, citizen action is incredibly *important. Everyone can then determine the* degree of contamination of their environment or level of exposure. Inhabitants of one territory will then be able to determine the actions to be taken."

"Independent authorities should work with NGOs and independent scientific organisations, to carry out control measures and afterwards there will likely be more discussions between experts to determine whether the level of radioactivity is acceptable or not.'

"Taking action is not very complicated. We can use our education system (schools, associations) to launch it and inform people. I think that being able to see it will help people understand."



"Combining local experts with national experts makes sense. It can help build trust."

"It is important that citizens are familiar with the studies and are able to understand their progress, that one territory is more contaminated than another, etc. This helps to build trust.'

"I think we have all arrived at the same conclusion, that we cannot prevent (citizen) action. I get the impression that 2020 France is aware that we live in an informationsharing age. So citizen action is not a necessary evil, but an opportunity.'

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CONCLUSION

To conclude the White Paper, there are three main ways that further steps can be taken to implement the recommendations.

1. SHARE THE INSIGHTS FROM THIS WHITE PAPER WITH ALL THE CLIS

The White Paper should be widely disseminated to all CLI members. It is a sound working document for sparking discussion on the issue of territorial preparation and post-accident management. It provides information to raise awareness of the issues associated with such a situation.

A press conference on a territory of one of the cross-border CLIs could be arranged to raise awareness of the reality of crisis situations and that citizens on both sides of the border are exposed to them. This would allow the previous and future work performed by the CLIs and ANCCLI to be showcased.

Finally, the recommendations of the White Paper could be presented at one or more public crossborder CLI meetings. A dedicated event will be organised to present these recommendations to the inhabitants of neighbouring territories living in one of the cross-border CLI areas.

2. PRESENT THE RECOMMENDATIONS TO NATIONAL AUTHORITIES

ANCCLI could present these recommendations to different national authorities. They could form the basis of an interesting discussion at the ASN as part of the roll-out of the work of CODIRPA in territories.

3. TAKE STEPS AT A EUROPEAN LEVEL WITH INTER-REGIONAL INSTITUTIONS

The White Paper constitutes the first step in cooperating with NTW to present these recommendations to the European Commission. Furthermore, it is a question of discussing the implementation of a European directive on postaccident management, including non-radiological aspects. Finally, creating platforms for supranational dialogue allowing cross-border coordination in this area is advised.

ANCCLI and the Group of cross-border CLIs could also liaise with existing cross-border institutions (Euro-regions, Euro-metropolises) to discuss recommendations and the possibility of engaging in joint discussion on cross-border preparation for post-accident management.

As for identifying long-term funding for territorial preparation, the next step will be to contact the European Committee of the Regions and seek support for applying for Interreg funding for initiatives relating to cross-border territorial preparation and post-accident management.

The European round table process ACN (Aarhus Convention and Nuclear) is planning a round table on post-accident management issues at the end of 2021. This would be a good opportunity to promote the White Paper and the initiatives resulting from it. "During the exchanges many issues were raised which are not resolved at the level of local or national political leaders. There are no answers for the time being.

The White Paper will be produced to reflect our concerns, but after that to whom will they be raised?"

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THE POST-ACCIDENT: ANTICIPATION AND PREPARATION **13 RECOMMENDATIONS**

- **1.** EVALUATE THE PRACTICAL IMPLICATIONS OF AN ACCIDENT, PERFORM AN INVENTORY OF THE RESOURCES AVAILABLE IN EACH TERRITORY
- **2.** PREPARING TERRITORIAL MANAGEMENT OF NUCLEAR ACCIDENTS, A KEY FACTOR FOR THE LONG TERM RESILIENCE OF TERRITORIES
- **3.** Anticipate all lifestyle challenges when preparing to manage the consequences of a nuclear accident
- 4. MAKE ECONOMIC IMPACT A KEY CONCERN FOR MANAGEMENT

5. DEFINE A DELEGATED RESPONSIBILITY FRAMEWORK TO FACILITATE LOCAL INITIATIVES

- 6. INCLUDE LOCAL INITIATIVE IN POST-ACCIDENT MANAGEMENT
- 7. PROVIDE RESOURCES TO SUPPORT TERRITORIAL EFFORT
- 8. IDENTIFY CROSS-BORDER RESOURCES IN THE EVENT OF AN ACCIDENT
- 9. FACILITATE DIALOGUE AND CROSS-BORDER COOPERATION BY AN INTERNATIONAL COOPERATION
- **10.** Identify and create sites and for a where cross-border preparation can take place
- 11. POOL TOGETHER TERRITORIAL STAKEHOLDERS TO DRAW UP A PROPOSAL FOR A EUROPEAN DIRECTIVE GOVERNING THE MANAGEMENT OF THE CONSEQUENCES OF A NUCLEAR ACCIDENT, NOT JUST THE RADIOLOGICAL ASPECTS
- 12. INITIATE TERRITORIAL PREPARATION WITH SUPPORT FROM CLIS AND ANCCLI
- **13.** PROMOTE CITIZEN ACTION AS A DRIVER FOR BUILDING TRUST : AN EXAMPLE OF TERRITORIAL INITIATIVES