SAFE LAND IN CROATIA?
A study of the demining process.

Siri Thode

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"It’s not the fear of death but of planned death, death invented in someone’s head, death as a statistical number, a mass death in a deadly game of power”

(Drakulic 1993:177)
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List of abbreviations

BHMAC    Bosnia and Herzegovina Mine Action Centre
BiH      Bosnia and Herzegovina
CCW      Convention of Conventional Weapons
Cromac   Croatian Mine Action Centre
ha       hectares
HI       Handicap International
HMA      Humanitarian Mine Action
ICBL     International Convention to Ban Landmines
IDP      Internally Displaced Persons
IED      Improvised Explosive Devices
LIS      Landmine Impact Survey
MAC      Mine Action Centre
MACA     Mine Action Centre of Afghanistan
MAG      Mines Advisory Group
MBT      Mine Ban Treaty
MRE      Mine Risk Education
NGO      Non-Governmental Organization
NMAA     National Mine Action Authorities
NOK      Norwegian Krone
NPA      Norwegian People’s Aid
SHA      Suspected Hazardous Area
TAP      Task Assessment and Planning
TIA      Task Impact Assessment
UN       United Nations
UNMAC    United Nations Mine Action Centre
UNICEF   United Nations Children Emergency Fund
UXO      Unexploded Ordnance
VVAF     Vietnam Veterans of America Foundation
QA       Quality Assurance
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Introduction

Landmines have been a major humanitarian problem since World War II. They were made to injure the enemy, not necessarily kill them, as a means to hinder the advancement of troops. In addition to this, landmines are effective in installing fear in the local population and the civilians, hindering them in leading a normal life. Mines slow down the recovery period after war or conflict as they must be cleared before the infrastructure can be rebuilt and the farmers can use their land and pastures.

In the 1990’s the international community became aware of the problem landmines caused as workers in Non-Governmental Organizations lost colleagues and beneficiaries to the weapon. At that time landmines killed on average 26.000 civilians each year (McDonald 2004). To get an end to the use of the weapon, the Vietnam Veterans of America Foundation (VVAF) and Medico International (MI) came together to work for the banning of landmines. They focused on the large amount of victims killed and maimed each year by mines, and after a year they were joined by other humanitarian organizations, and together they formed the International Campaign to Ban Landmines (ICBL) (Matthew 2004). Today (2004) the Mine Ban Treaty (MBT) has 143 State Parties, 9 signatories have not ratified it, and only 42 countries have not signed the treaty yet (ICBL 2004). According to the Landmine Monitor Report (ICBL 2004) the number of casualties is probably 15.000 to 20.000 a year. This is a reduction from previous years, but there are many accidents that have not been reported because many countries do not have the proper reporting mechanisms.

The war in the former Socialist Federal Republic of Yugoslavia started in 1991 when Croatia and Slovenia claimed their independence from the Federation. The Yugoslav National Army (JNA) gathered its forces throughout the Federation and waged war on Croatia in July 1991, and after seven months the first period of fighting was over. Between 6.000 and 10.000 people were killed, 400.000 were homeless, and the Serbs occupied a third of the Croatian territory (Ramet 2002). By 20th January 1993 there were 533.364 refugees and internally displaced persons in Croatia (Krleza 1993). In 1995 the Croatian forces drew the Serbs out of the Knin area through Operation Storm, an operation supported by the international community, and the Croats regained their initial territorial boundaries. The number of people killed, refugees, and internally displaced persons increased drastically. In Eastern Slavonia in the north-east of Croatia, there was a peaceful peace process called the integration process. In this region Serbs and Croats live peacefully side by side, while in the southern areas only a few Serbs have chosen to return to their previous residences. Because of movement back and
forth over the frontlines, the “Homeland War” in Croatia led to a vast number of landmines and unexploded ordnance (UXO) being scattered throughout the country (see Appendix IV).

Why Croatia?
I wanted to perform my fieldwork in the Balkans because I felt that this was a region about to be forgotten in the international community when it came to the mine problem. When I contacted the Norwegian People’s Aid (NPA) in Oslo, they suggested that I should go to Croatia because of the program they have there. NPA is the only NGO accredited by the Croatian Authorities to do mine action in Croatia (Informant PC, EJ). Croatia is unique in that NPA has introduced Task Impact Assessment (TIA) in their program as a means to find high-impact areas that are most likely to be put to use by the local population after the clearance of mines.

NPA is widely respected for humanitarian work both when it comes to mine action and development aid. They were first involved in mine action in 1992 and has since had projects in 16 countries and 3 continents.¹ It was not until after I arrived in Croatia I learned that there are more mines in one county in Croatia than there are in all of Kosovo (Informant PC).

What to look for?
I wanted to see how NPA work, how they prioritize areas to clear, how it affects the local population, and if the cleared areas are re used by the local population.

In order to find what i wanted to see, i chose to look at the demining process because of what it involves. To me it involves the whole aspect of demining. The process itself, including organizing action, procedures, tools, and equipment on the one hand, and community liaison, development, empowerment and reuse of cleared land on the other hand, is a huge operation which requires much planning and funding. I will describe this process in the thesis, using interviews with different participants; farmers, NPA officials, deminers and county representatives.

Demining procedures are set by international standards and therefore do not vary much from country to country when it comes to the use of tools and other equipment. The reuse of cleared land has not been documented to any particular extent and therefore I have nothing to compare the material with. But reuse is an important part of the demining process

¹ http://ips.idium.no/folkehjelp.no/?module=Articles;action=ArticleFolder.publicOpenFolder;ID=261;lang=nor
as it proves the necessity of having the areas cleared, and therefore I have chosen to make it a part of the thesis.

**The Chapters**

Chapter 1 describes the methods used before, during and after the fieldtrip to Croatia. It looks at different challenges experienced during the stay, and how I chose to handle the material after returning home.

Chapter 2 describes the mine situation in the world today. It sweeps through some of the mine history, it looks at different types of mines, and then it briefly mentions Croatia at the end.

The third chapter discusses the Mine Ban Treaty, how it came to be, what it does, which faults it has and the problems caused, and then asks why the international community needs to have this ban.

Chapter 4 is more technical as it describes different clearance techniques and different objectives in mine clearance. It also mentions the NPA in Croatia, and the different research being performed.

Chapter 5 looks at how demining is organized in Croatia. It discusses differences between Cromac and the NPA and suggests consequences of these differences. One of the consequences discussed is empowerment, and how this is an important part of humanitarian mine action. Further on it looks at more differences in how Cromac and the NPA prioritize which areas to clear.

The last chapter of analyses, chapter 6, concerns the farmers. Here I present the farmers I interviewed, what their situation seemed to be, and their plans for the future. It discusses the reuse of land and how communication with demining agencies is important in making the farmers feel safe in their community.

The final chapter in the thesis is the concluding chapter. Here I draw lines from all the former chapters and try to see what we can learn from mine action in Croatia.
Chap. 1: Method

Choice of method
My fieldtrip to Croatia lasted for one month. It was initially planned to last two months, but the nature of the thesis, and the cooperation with the Norwegian People’s Aid shortened the stay considerably. Had it not been for the help received from this organization I would not have been able to write this thesis because of the amount of information that is not available to the public. I chose to do a case study purely based on qualitative methods because that would be the best way to get the information and knowledge needed to write this thesis. Triangulation between quantitative and qualitative methods was not an option because of the limited amount of time and entities this thesis contains. To collect data I used semi-structured interviews when interviewing the informants, and a minidisk to record the interviews, and when I got home I performed one telephone interview. One of the interviews in Croatia was unfortunately not recorded as the mini disk recorder did not work properly that day. I also spent time with the farmers, some of them in their backyard, and some of them in their fields. Interviewing the farmers in the fields helped me get an understanding about the size of the fields. Other sources of information are secondary literature. Before I left for Croatia I read different reports and papers about mine clearance and landmines in general. This helped me get a sense of what landmines are about, and it helped me prepare for the situation in Croatia.

Case Study
It is difficult to find one solid definition of a case study as different literature gives a new definition, but one definition says that a case study

.. is a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence (Kvale 1997, Robson 2002:178).

This means that a case study looks deeper into the case that is being studied, and uses more ways of getting information than just secondary literature. It means that the researcher has to stay a while in the context of the case in order to understand the reasons why things are the way they are. A case study means that the researcher studies a few cases, or one, in considerable depth (Gomm et al. 2000). A case study also means that the researcher “construct cases out of naturally occurring social situations” (Gomm et al. 2000:3). The
researcher does not construct the social situations, he or she looks at what is already present in the real life of the different cases studied. By participating in the context of the case, the researcher will have access to information that is particular for that specific area of life.

It is difficult to find a good definition of a case study because a case and a case study can be almost anything. It can be a family in a village, an organization, or a ritual. The important point is that the researcher in varying degrees tries to understand the context of the case and tries to draw out the essential meaning in what the different actions are in that context. These different actions can be everything from the everyday events to the problems concerning different necessities. Stakes (Gomm et al. 2000) argues that what is important in a case study is not that it gives generalizations, but that it gives a proper description of the case that has been studied. Analytical generalisation can be said to be one of the main characteristics that separates qualitative and quantitative research. Quantitative generalisation shows the probability in a happening drawn from a random selection of entities. Quantitative research has many entities and therefore more facts to generalize from, than qualitative case studies (Kvale 1997). When the researcher tries to go deep into one community or organisation in a case study, it is evident that the information acquired in the one case, is not valid in other contexts and settings. Kemmis (Robson 2002) argues that in case studies you can have a naturalistic generalization. This means that the knowledge the researcher has can have been developed through experience and tacit knowledge. It does not expect predictions, but leads to expectations about similar cases in other places. In order to have this development of tacit knowledge, the researcher has to explain the case and context in detail for the public to see the connections with other cases. This detailed description is often called “thick description” after Geertz. This means that it goes deep into the facts of the case studied, and seeks to understand it on the premises of the local population, and it is explained in detail to the public.

**Performing and recording semi-structured interviews**

I decided to use semi-structured interviews on my fieldtrip because I felt that it would be the best alternative to get the information I wanted, and also to get information that was not directly on the research questions although related in a way that gave me more understanding about the situation in the country. Semi-structured interviews are based on an interview guide with a few predetermined questions about the different topics the researcher wants to learn about. It allows the informants to talk freely about related issues, and the questions will help the interview in getting back on track if it is necessary. These semi-structured interview
guides are not always the best alternative. I had a few interviews where the informants answered only the questions asked and where it was difficult to find follow-up questions. It might have been a good idea to have both semi-structured and more structured interview guides to use in the different situations.

I used a minidisk recorder when I performed the interviews. I did this so that I could have as much focus as possible on the informants, and on what was being said. I always asked the informants at the beginning if it was okay that I recorded the interviews, and at the end of the interviews I asked if I could quote what had been said, and if I could mention their names in the thesis. Asking these last questions after the interview before I turned off the minidisk, gave the informants the opportunity to think through what we had talked about, and then give their approval or disapproval. It was also a good thing for me, because I now have on tape the informants’ reactions to the questions about quoting and using their names. This way there will be no mix-ups from my side as to who approved or disapproved.

A problem with using a recorder is that the person being interviewed may feel uncomfortable in the situation, and become self-conscious (Crang 2001). This can affect the information the informant is willing to share. I did not see this in the interviews I performed. One informant told me that it would not be necessary to record the interview because it would be written down by his secretary. I asked him if it would be written down in English, and when he answered negatively I again asked if I could record because of the language problems. The informant then agreed that it would be best to record the interview. If he had said that he preferred I didn’t record, then I would have taken notes instead. This is one of the reasons why it is important to ask the informant if it is okay that you are recording, and also to ask if you can quote the informant and if you can mention the person’s name in the thesis. Even though I have consent from all my informants, I will not mention their names because it is of no importance to the thesis and the value of the information. I have instead chosen to use random initials to anonymize them.

I found it difficult to take notes during the interviews because I felt that it would limit my contact with the informants. It was also difficult to take notes when we were out walking in the fields. Because I had to rely on two translators during my stay, I found that recording the interviews was necessary in order to see if the translators saw the same points in the interviews as important. It helps the validity of the thesis that they had more or less the same opinion as to what was important for me to know when they translated, and they had mostly the same interpretations of the farmers’ situations.
During fieldwork one always has conversations with informants without the recorder being turned on. These conversations I have termed “informal conversations”. I was told stories from my landlord, in the NPA-jeep to and from minefields, at café’s and so on. The information learned during such talks becomes integrated in the mind and feels like common knowledge, and is therefore difficult to refer to as I have no evidence of the conversations taking place. In the text I have therefore referred to such information as “Inc”.

Observation
During and before the interviews I used observation as a way of understanding the different fields that had been and not been cleared of mines. I saw the size of the fields, and their condition. Some of them were in use, some were not, and some of them had just been prepared for use, but the farmers did not yet have the seeds they needed for growing. Observation as a method can be combined with almost any other kind of method because the researcher only looks and listens. You do not ask about feelings or views, you just watch what they are doing and how they are doing it (Robson 2002). This method is useful because it gives an understanding about the context and relations that you will not find in books (Thagaard 2002). You can see pictures and descriptions, but the real life size will still be missing. I found observation of the fields particularly useful because the fields in Croatia are not like fields in Norway. You do not have one big field with one owner. In Croatia you have one big field divided between several owners through, among other things, inheritance. I did not do participant observation as I did not work on the fields. It might be said that I did an unobtrusive observation in that it was non-participatory and non-reactive (Robson 2002). I also got invited into some of the informants’ homes. They were all aware of who I was and what I was doing, so the observations I did in their homes were not hidden. I do not have any recorded data about what I saw inside the houses, and it is not necessary for the thesis that I mention them in particular. I did not witness actual work on the fields; I just saw the different fields and heard about the farmers plans for the future.

Using translators
Going to Croatia meant the need to have a translator or two. Very few people in Croatia outside of the biggest cities speak English, and since I was going to the surrounding villages, I was completely dependent on having a translator. I had to have two because the first one could not come with me to Eastern Slavonia for different reasons. Having two different
persons translating for one thesis can become a problem with the validity of the thesis. As earlier mentioned I used a minidisk recorder to tape all the interviews, and these recordings have proven that the translators, even though they did not cooperate in any way, have translated the same points in the interviews. This means that they have had the same opinion of what was important to tell me, and it gives consistency in the material.

There are several positive and negative aspects in having a translator, and I will go into some of them here. They concern personality, the amount of information, the interview situation, and the transcription of the interviews.

During my stay in Croatia I realized that the translators’ personality, and how well you get along with the translator, is as important as the quality of the translation. This is not only in the interview situation, but also in how comfortable you are in being dependent on this person. As earlier mentioned I had to use two different translators, with two different personalities. This represented different challenges for me. The first translator had a personality that was relaxed and focused, while the other one was more restless and unfocused. This affected the interviews in different ways because the translators had unequal abilities to make the informants relax and feel comfortable. The first translator had very good contact with the informants the minute he met them, and was able to keep a professional tone and knew what he was supposed to do. The other translator had never done anything like this before and appeared to be uncomfortable in some of the situations, especially when the informants talked about how difficult it was to survive on their crops, or without their growth. The translator could make a little laugh in these situations, while the other one would stay serious and appear to sympathize with the informant.

Relationships
There are three relationships you have to consider when using a translator in research. The first is the relationship between the researcher and the translator, the second is the relationship between the researcher and the informant, and the third is between the informant and the translator. The relationship between the researcher and the translator is important when it comes to how well they communicate with each other and understand each others way of thinking. If they have a problem communicating, the interviews will be bad, and the informant will probably feel uncomfortable. I noticed myself that I communicated differently with the two translators and that I had less patience with one of them and could therefore be stricter with him in the interviews when he did things I did not approve of. Having to have a conversation with an informant via the translator effectively limits the relationship between
the researcher and the informant. Every communication goes through a third person, and because of that it is difficult to establish eye contact, and it is difficult for the informant to talk about personal issues because of lacking connection. At this point the relationship between the translator and the informant becomes important. In my case both the translators had good people skills and they managed to create a trusting atmosphere in the interviews. This helped the informants to open up, and they also had conversation between them in the breaks. One of the translators had such good people skills that I often wondered if he knew the informants from before.

The amount of information
The amount of information a translator can give is limited. This naturally limits the information in the thesis, but having recorded the interviews I have the opportunity to get someone who speaks Croatian to listen through the recordings, and give me a second opinion about what has been said in the interviews. Many of the informants who worked in the public offices had a lot of information to give, and could speak for several minutes before the translators got the chance to translate. The translators then only gave me a summary of the main points in what had been said. I experienced sometimes that I had to ask the translator and not the informant follow-up questions in order to fully understand what had been said. I do not know if the answers the translators gave me in these situations were their own interpretations of what had been said, or if it was what actually had been said. This is one of the weaknesses of having translators; you never know if they translate their own interpretation or if they translate what has actually been said by the informant.

I noticed a big difference in the amount of information I got when I had the chance to interview a person who spoke English, and how much easier it was to establish a relationship with the informant when we could talk directly to each other. The translator I had at the time sat in on the interview as we didn’t know how well the informant spoke English. He told me after the interview that the informant was very good at explaining things. This made me wonder if his job of translating would have been easier with this person and if he would have been able to give me a better translation and more information than with the other informants, and it made me understand more about the difficulties in translating an interview.

There are different types of follow-up questions and asking follow-up questions is important to get the full picture in a semi-structured interview (Thagaard 2002). I found this difficult with the translators present because of the limited version of the stories that were given to me.
through the translations. Mostly my follow-up questions were of the kind where I asked the translators about what the informant had meant with things said. These questions were often answered by the translators because the informant had already told them these things, but they had not translated everything to me. After having asked the translators these questions it was hard to come up with new and even more detailed questions to the informant. This is a weakness in the thesis, and I am aware that if I had spent more time in Croatia I would have been able to have follow-up interviews with the informants.

Cooperating with an organization
Cooperating with the NPA gave me a lot of advantages that helped get the information I needed and to find the informants I needed. But there are both positive and negative aspects of working with an organization that has to be considered. These aspects are the availability of information and informants, the choice of informants, the interview situation and the aspect of having control over the fieldwork. I also found that, when in Slavonia, asking the questions I did made it important to clarify who I was, what I was doing, why I was doing it, and also that I had no influence on the prioritization process.

The availability of information and choice of informants
The NPA have information in their database that is not public, and without this cooperation I would not have been able to get hold of it. That would mean that I would have no maps, and no TIA to show as examples of how things are done. They helped me in the best possible ways by printing different papers, giving interviews, taking me to minefields, and finding informants.

I had two different kinds of informants among the farmers in Zadar and Markusica. In Zadar I interviewed NPA contact persons among the farmers, and the ones they had a more or less personal relationship with. In Markusica it was different. The first person they put me in contact with was their contact person. And this person put me in contact with other local farmers that he himself knew, but with whom NPA had no contact. The main difference was that these farmers did not know what NPA was and what they were doing, and another difference was that no one from NPA sat in on the interviews.

Having the organization arrange the interviews and decide who I should talk to may have made the material biased in favour of NPA. Most of the people I talked to had nothing negative to say about the organization at all, except the persons in Slavonia who had misunderstood what NPA did in Croatia. Most of the informants chosen for me in the Zadar
area were people that NPA had contact with and who for some reason they cooperated with. Still, I do not think they intended to give me informants with only sunshine stories, but they gave me the opportunity to talk to the ones they knew they could get hold of. The fact that the NPA assisted me in finding informants, also helped me get in touch with people in public offices that I would not have been able to get in contact with on my own. One of the interviews we barely got because the translator was wearing sailor pants. This interview turned out to be important because the informant was one of the few officially employed who were open to the idea of getting information out to the public when NPA first came to the country and started their mine action operations. I have 18 interviews with people in different positions (see Appendix I), but it was not until I got back home to Norway that I found the informant for the telephone interview who gave me a different story than I had heard in Croatia. This last informant managed to give me a more nuanced picture of NPA and the mine clearance operations in Croatia.

Another important aspect in choosing informants is gender. Most of the farmers I interviewed were male, except for two. The female informants gave me a more personal picture of what it was like living with mines, and they talked about the fear of using a field even though it had been cleared. The male informants did not speak of fear, but mostly the frustration from not being able to use the mine contaminated land.

The interview situation with translator and “guest”

The purpose of a qualitative research interview is to understand sides of the informants’ life from the informants’ perspective (Kvale 1997:37)(own translation).

Having translators makes it hard to see the difference between the informants’ perspective and the translators’ perspective. You will never fully know if what the translator is telling you is the full answer the informant gave, and if it is being said with the same words. Having a translator in the interviews affects the information and the opportunity for the researcher to establish a trusting relationship with the informants. There may also be misunderstandings between the different parties in the interview, and this may affect the information in different ways. In the interview situation you want to make the informant feel comfortable and consider you trustworthy, and that whatever the person has to say, it is important. An interview is a conversation between unequal parties where the researcher is the one who controls the situation and who defines the topics of conversation (Kvale 1997). This makes it an unequal
power relation were the researcher has power over the situation. My experience was that it was often the translators who had the real power. They were the ones who decided how to phrase the questions, they set the tone of voice, and they decided what was important for me to know. When I asked the informants if I could record, one of the translators had a habit of answering “yes, of course” without asking the informants first. I also noticed a few times that one of the translators got bored asking the same kind of questions to people, and this was in the tone of his voice. It also happened a few times that the informant and translator discussed my thesis and they talked about how many people would tell me the same stories and that I, because of that, would not need to talk to so many. I felt this made me look incompetent in the eyes of the informants. Another incident was when one of the translators started asking his own questions to the informants, and only translated the answer to his question, and not to the one I had asked before. I noticed this when I realized that the answer had nothing to do with the question I had asked. But most of the time I had a sense of control over what was happening during the interviews, I felt I connected with the informants, and both the translators did a good job in translating the answers the informants gave.

The quote in the beginning of the segment says that the researcher wants to find aspects of the informants’ life from their own perspectives. The questions I had were for the most part directly on the issue I was looking for and this was only one aspect of their lives, not their life history, and the translations seems to be the same with both translators. This makes the data more reliable than if I had wanted to know more complicated aspects of the informants’ lives, because that would have affected the translations and the need for me to know more details in the answers.

Cooperating with NPA gave me, as earlier mentioned, the opportunity to interview people I most likely would not have been able to interview for different reasons. Travelling with the NPA TIA-officer was useful in that she told me about the different places we passed, she found villages and informants, and she printed out the TIA for different fields and copied maps. She also sat in on some of the interviews. This also has both positive and negative aspects. The positive aspects are that she was able to elaborate the answers when the informants were unsure of facts, or if there was more I needed to know about the issue that the informants did not mention. But it may also have affected the information in that the informant may not have wanted to tell the whole truth when I asked “what do you think about the work that NPA does?” Especially this question may have been affected. The answers I got from the farmers in Slavonia to the same question, was different because most of them had no knowledge of what NPA was doing. But this also relates to the fact that in Zadar I only talked.
to the contact persons of NPA, while the only person NPA had contact with in Slavonia was the one taking me around to visit the other farmers and see their fields. The TIA-officer also sometimes answered instead of the informants, not giving them the chance to speak for themselves.

Another aspect of having the TIA officer sit in on the interviews is that because the informants liked her and had a personal relationship with her, the atmosphere was relaxed and I believe this made the informants less sceptical of who I was and what I was doing. I do not think they took me less seriously, but having her there may have helped the informants feel safe and that they could trust me.

Control over the fieldwork
Cooperating with an organization has several positive aspects, but there are also negative ones, as I have discussed. One of the most important negative aspects, as I experienced it, was the feeling of losing control over the fieldwork and the thesis. The first thing I heard when I arrived in Croatia was that my initial hypothesis did not apply in Croatia, and that I would not need to spend two months there because it would be a waste of time and money. Also, when I was in the process of interviewing farmers I was told that I would not need to speak to the number of people I initially wanted to, because they would all tell me the same story. I also experienced the translator agreeing with this view, and that this issue was being discussed with a few of the informants while I was present. I felt this made me look naïve and unprofessional in the eyes of the informants and that they might have lost the respect they initially might have had for me. I tried to tell them that if all the informants would tell me the same story, that would be a good thing, but it was difficult to find appreciation for the geographical method of collecting data. Because of the amount of help NPA gave me, I also felt that I could not go my own ways and “work alone” to find informants because that could in some ways offend the ones that had helped me so much already. It could also have proven more difficult to find information without help from NPA, as they gave me all the background information I needed about the different areas they had cleared.

Transcribing and analyzing
Transcribing an interview is a way of interpreting the material given to you. Through the transcription you make decisions about how to transcribe, what to transcribe, and in what form to transcribe. There are several ethical considerations in research, and one of them is that the researcher has to consider what it means to make a loyal, written transcription of the
interviews (Kvale 1997). If the informant is not fluent in English, are you then supposed to write down the interview with the grammatical errors, or are you supposed to correct the language and write it down correctly? I chose to transcribe with the English the translators used, with the grammatical errors they had. I did that because it was not the informants’ mispronunciations, but the translators. I also felt that in order to get it right, it was important to write it down that way, because it was the translators’ understanding of what had been said, and I wanted it as correct as possible. I chose to write the English properly in the thesis when I had analyzed the material and got the correct meaning of what had been said. I interviewed two Croatians who spoke English, and after one of them, when I asked if I could quote, the person told me “yes, if the English is correct”.

To do the analyses I transcribed all the interviews and printed them out. I did not write on the entire page, but saved about 6 centimetres on the right side of the sheet in order to write down the different comments I would think of while reading through the material. I found out which topics I wanted to write about in the thesis, and later collected the different comments on the same theme in a new document thereby collecting the material on different topics. This made it easier to find the themes and quotes I was looking for when writing and I could have everything in front of me instead of having to switch between documents on the computer. In case some quotes had been removed from the context, I still had the original prints where I could look it up.

**Summary**

Considering these different aspects though, I do not feel that this has affected the data I have collected in any significant way. I have got information that is relevant for my thesis and I have been able to interview people with different social positions, some of which I might not have been able to talk to had it not been for NPA. When transcribing and analyzing the material I have seen that the two different translators have had the same opinion as to what was important for me to know when I interviewed the different farmers.

I have tried to describe different sides of the interviews, and how different persons can affect the interviews in different ways. The interviews where the TIA-officer sat in had a different atmosphere than the ones were she did not sit in. This person is well respected in the local communities I visited, and as earlier mentioned, I believe this gave the informants more trust towards who I was.

In this chapter I have shown how different situations may have affected the material I have used in this thesis. All these aspects, though maybe biased in different ways, have given
me a unique angle to the mine problem in Croatia and because of that I have chosen to use everything I have collected. It is important to be aware of the different pitfalls when performing research and to take them into consideration before using the material in a thesis. I feel I have done this in this chapter, and that having done it, gives the material more validity and credibility than if I had not done it.
Chap. 2: The World’s Mine Problem Today

.. The sudden exertion of pressure detonates a low explosive that in turn detonates a high explosive charge. The blast sends a violent wave of energy through human tissue that carries with it shattered fragments of metal, plastic, earth, vegetation, bone, flesh, clothing and footwear. The remains of the limb are now connected to the body by slivers of flesh. The wound is saturated with a cocktail of particles delivered at speeds of thousands of miles an hour by the blast wave. The events [...] take no more than a hundredth of a second to unfold. (Monin and Gallimore 2002:xv)

The history and development of landmines

Landmines have been in use for many years, but it is uncertain when and where the first landmines were made. There are evidences that the Chinese made mines during the Ming Dynasty, and some believe the Chinese used mines even before this. The Romans and Assyrians also used weapons and techniques that resemble the effect of the landmine; to slow down advancing enemy troops, but without explosive charges. These early techniques were most of all spikes hidden in the ground that would penetrate the feet of the horses and soldiers, and in that way hindering an effective advance (Monin and Gallimore 2002). During the Civil War in America the soldiers dug trenches and filled them with gunpowder and sat fire to it when the enemy was within range. It was World War I and the age of industrialization that really gave the landmine its position in the world of warfare. World War I was a war characterized by deep trenches in which the soldiers from all sides fought long and hard battles, and they would dig themselves beneath the enemy trenches in order to emplace explosives under them. This often resulted in accidents as the charges would be blown before the soldiers had emplaced them properly, and it often also ended up in fighting below ground as both sides dug tunnels towards each other, and met in “the middle” (Monin and Gallimore 2002). Even though they were often used, the landmines were unstable and not fully developed. In addition to being blown too soon, charges also blew too late, and therefore ended up killing troops on their own side.

Mass production was the feature of the industrialization. The industry not only mass produced cars for people, it also produced weapons in a way never done before. The cavalry became out-dated and ineffective, and machine guns, tanks and mines became the new components in a new industrial kind of warfare. Because these weapons were so new, they had many faults. The tanks were initially produced to scare off the enemy and to travel long
distances in rugged terrain, but being new they were unstable and difficult to manoeuvre. They sometimes accidentally fired at their own troops. In order to stop the advancement of, and benefit in having, tanks the anti-tank mine was constructed (Monin and Gallimore 2002). When military personnel from the opposing army learned how to remove anti-tank mines and place them elsewhere, the portable mine, also known as the anti-personnel mine, was constructed. Some argue that the anti-personnel mine was constructed to protect the anti-tank mine from being removed, but there are disagreements as to if this is correct. Independently of why they were produced, using portable anti-personnel mines to protect anti-tank mines is a pattern one can see even today. In Slavonia, Croatia, the mines were laid systematically during the Civil War in the 1990s. Anti-tank mines were laid with 3 or 4 anti-personnel mines in a half-circle around for protection. The idea is that if a deminer or soldier advances to remove the anti-tank mine, he or she will most likely step on one of the anti-personnel mines, and become injured or killed (Monin and Gallimore 2002).

The Second World War had an extensive use of landmines, both anti-tank and anti-personnel. It was in this war that the anti-personnel mine was first used in its own right, particularly in the fighting between the Finnish and Russian troops in 1939-1940. It was not until the Second World War that the landmine became a popular weapon with extensive use and since this war, the weapon has been favoured and used in almost every military conflict. Some of the mines developed during WW2 set the standard for mines that are being used today. This especially goes for the German S-Mine. This mine is also called “Bouncing Betty” or “Jumping Jack”, as it jumps into the air after having been stepped on, and explodes when it is one to two meters above the ground. In that way it reaches the body’s softest parts, where it will do the most damage; the belly, neck, and sometimes also the head (Monin and Gallimore 2002). This mine is often found in Croatia today after having been deployed during the Homeland War. Other wars with extensive use of anti-personnel landmines are the Vietnam War, the Korea war, the gulf war, wars in several African countries, the recent war in Iraq after the American troops took control over the country, and many, many more.

The problem today
All the countries mentioned earlier, Angola, Egypt, Bosnia-Herzegovina and more, with all their mine affected areas, represent just a small part of the mine problem today, and with 15,000-20,000 people in mine related accidents world-wide each year, gives an impression of the extent of the problem. Still there are mines being deployed in countries that are already affected, enhancing the problem and making the humanitarian crisis even bigger. Mines will
not disappear in the near future, nor do they belong to the past. They are still being used, and as earlier mentioned, the mines are still around after a conflict is over. Even though the warring parties have agreed to a peaceful settlement, the civilian population will still suffer damages and losses for many years to come.

Landmines are inexpensive to produce, they are easy to deploy, they do not need maintenance, and they do not need supervision. Many mines can be operable for many years. Although these characteristics make it a popular weapon among military personnel and guerrilla groups, these characteristics also make the weapon a constant threat to the civilian population. The mines do not choose their victim, they are indiscriminate weapons that kill and maim anyone who activates it, be it a shepherd, a child, or military personnel (McDonald 2004).

As with all worldwide statistics, there are incomplete numbers as to how many mines there are left in the ground today, but a total of 80 countries have a problem with mines and UXO\(^2\). When humanitarian organizations directed the attention towards the problems caused by landmines in the beginning of the 1990s, it was estimated that more than 100 million landmines had been left deployed in different countries. At the end of the 1990s the US State Department estimated there to be between 60 and 70 million landmines in the ground, and between 2 and 5 million being deployed each year. These mines can be found anywhere in the affected areas, from along paths and in fields, to inside schools, hospitals and private homes. Mines do not disappear after a war or conflict has ended, they lay around for years, waiting for their victims to cross their path (McDonald 2004). Many countries still experience the use of landmines because of ongoing conflicts, such as Iraq and Afghanistan. Countries that have recently deployed landmines are India and Pakistan, who deployed about 2 million mines along their border in 2001 and 2002, Russia who deployed in Chechnya in 1999 and 2000 and in Myanmar from 1999 to 2004, and Ethiopia and Eritrea who deployed hundreds of thousands of mines along their border from 1998 to 2000 (ICBL 2004). Since 1999 the use, production and transfer of anti-personnel mines have decreased, but there are still mines deployed in many of the world’s countries.

The landmine is dangerous in more than one way. It will not necessarily kill you, but will most likely injure you badly, and leave you incapacitated for years to come, if you do not have well established health facilities. Many countries do not have that, especially Third World countries, and therefore it is difficult to get the right treatment in time. This can lead to

\(^2\) http://ips.idium.no/folkehjelp.no/?module=Articles;action=ArticleFolder.publicOpenFolder;ID=261;lang=nor
infections and further amputations. In addition to the physical injuries there is the psychological stress of living in a mine affected area. Parents can never let their children play without supervision, and the parents risk getting injured or killed every time they have to gather firewood or water or other basic necessities. Taking a short-cut home or to work can be lethal. Even a short-cut that has been used for several days can suddenly turn out to be lethal as many mines become more unstable as time passes by, and other mines are equipped with a time-lag (In.c, Rena).

Because of the extent of the suffering, the landmine has caused a humanitarian crisis (Monin and Gallimore 2002). Millions of people worldwide have limited or no access to the basic necessities in life because of the constant threat of getting killed or maimed by anti-personnel mines. Most of these people depend on aid from either their own government or from international aid agencies in order to have enough food. Some of them take the matter into their own hands, as in Cambodia, and start demining their farmlands and neighbourhoods themselves (Bottomley 2003b). This is in a way helping the clearance teams in that there is less to clear, but it also makes their job more difficult since maps over affected areas will no longer be correct, and they can never be completely sure that the area is 100% safe. If the deminers have limited contact with the local population they may experience clearing an area that has already been cleared, and in that way waste their resources when they could have been focusing on another spot. The irony in the matter is that it is not the military compounds or government buildings that suffer the greatest damage and losses; it is the civilian population with already limited resources, and it is mostly the men in their prime working age that are prone to be injured. This causes future sufferings in the families as they loose an important source of income, and in addition have to spend often huge amounts of money on health care and hospitalization.

There is a need for constant international commitment to this issue, as it concerns the whole world, and will not go away in the near by future. As will be mentioned in the next chapter, the mines do not only affect people who live in the contaminated countries, but people from all over the world. In addition to funding clearance, there is also a need for funding research so that new techniques and machines that can clear mines faster and safer than today can be developed.

Examples of mine affected countries
Giving examples of countries affected by landmines leaves many options. Since there are about 80 countries in the world that have this problem, one has to consider which countries to
mention. Since this thesis is about NPA’s mine clearing in Croatia, the examples will mostly be from countries in which NPA has done mine action.

Being mine affected many consequences for a country, for example denied access to land, poverty, hindrance to food production and reconstruction, and the hindrance for refugees and internally displaced persons to return safely to their previous homes. The country has recently experienced a war or conflict that has affected the country both regarding politics, economy and infrastructure. When rebuilding the land there will be difficulties because of the mines being deployed. Whether the government or military has got hold of maps that show where the mines are or not, depends on the country and its practices in warfare (Informant PC). Afghanistan is an example of a country with a serious mine problem but with no records showing how many mines have been deployed. 1,3 billion m² of land is contaminated with mines stemming from 13 different countries after many years of military conflict (ICBL 2004). Having maps that shows where, and how many, mines are deployed, increases the opportunity of getting the country back on track considerably, as long as there are means to make the local population aware of where the mines are, and in that way decrease the number of accidents. Most mine affected countries do not have those kinds of means after the end of war, and experience a high rate of accidents and injuries caused by mines. In all fairness, marking the mine fields is not always enough to reduce the amount of accidents. Many farmers do not have the time to wait for the fields to be cleared, so they take their chances and use the fields anyway. In Cambodia the farmers have their own village deminers. These farmers will rather take the risk of getting injured, than not to be able to feed their families (Bottomley 2003a). Farmers are one of the most exposed groups of people when it comes to being injured by landmines. They are out in the fields, they herd their livestock, and they are far away from help when an accident happens. Another group exposed to the danger are returning refugees and internally displaced persons (IDPs). They are not aware of the danger in their local neighbourhood as they have not been around for a long enough time to learn where the mines are. In some places hostilities towards certain ethnic groups result in mines being deployed in already cleared land. This was the case in Bosnia Herzegovina in 2003 where a farmer got killed (ICBL 2004). Bosnia Herzegovina is the most mine affected country in Europe with about 4% of their area contaminated. Both Bosnia and Kosovo have had large storages of mines and other munitions since the end of the war, and a weapons amnesty for the civilians has only helped in Bosnia. In Kosovo the amnesty has not helped, and this has been attributed to the disturbance in the country since the end of the war. Disturbance of this kind has not been a problem in Croatia (ICBL 2004). With this said, there are not many
refugees returning to their pre-war residences in Croatia, and one reason can be the way the war was ended.

In Africa there are several poor countries with people trying to get by, fighting war, conflicts, draughts, and epidemics. In addition to this, there are mines. Some of the affected African countries are Angola, Egypt, Mozambique, Rwanda and Somalia. Angola and Bosnia-Herzegovina (BiH) share the same problem when it comes to the returning refugees, as they do not know where the mines are, and are more often involved in accidents. Between 2003 and 2004 mine related accidents increased drastically in Angola, and there was concern that this was due to the increased repatriation in the country (ICBL 2004). In February 2004 BiH participated at the Standing Committee meeting organized by the MBT, and described their mine action to be

a precondition for the reconstruction of natural and economic resources, return of refugees and displaced persons, and further economic development of our country (ICBL 2004:192).

Still, military personnel discover mines in old military compounds, and in 2003 less than half of the areas of what was expected were cleared for mines. In order to effectively rebuild a war torn country and enabling the local population to manage without national or international aid, mine action is necessary. And it will be necessary for many years to come.

Types of Mines
More than 350 different kinds of landmines are produced in different countries and with different means of accomplishing injury. Landmines can be simple in both design and execution, and they can be more complex and harder to discover. “Simple” mines, called blast mines, are mines that are hidden in the top soil, and that will explode by direct contact. They will bring debris from the ground, from the mine itself, and from the clothing and footwear the victim is wearing. Other mines, fragmentation mines, contain hundreds or thousands of spikes inside, depending on the size of the mine, and when detonating the spikes will be spread in great speed in different directions, penetrating everything that comes in their way. All fragmentation mines have a certain killing- and injuring range, and the most commonly used mine in Croatia has a killing range of approximately 25 meters. Many mines, though,

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3 http://science.howstuffworks.com/landmine2.htm
can kill at a range of 50 meters if not more, and injure at a distance up to 200 meters (Cromac 2004).

Interestingly there are different kinds of mines used in different countries. There are always one or two mines that are typical in that specific region or country. Some mines are even disguised as something completely different, as in the Vietnam War. The Vietnam War was a particularly terrible war in that the Vietcong had many intricate ways of fighting the American forces. They not only had underground tunnels they hid in, they also set up booby-traps that would kill the soldiers, or give them lethal wounds. The booby-traps did not necessarily contain explosives, they were often ditches with spikes in the bottom and sides to injure either a foot or an entire body falling down into it, or they were bamboo sticks with lethal poison or human excrement at the tip that would give the wounds lethal infections. The Vietcong also became known for their inventive use of grenades in setting explosive booby-traps. Two grenades could be attached to each other by a trip wire between two trees, and when a passing soldier tore down the trip wire, the grenades would be blown up in the soldiers’ direction. Mines can be disguised as, or inside, pens, fruit, dolls, sinks, toilets, wells and more, and are often equipped with tripwires or time lags. The Vietcong often used coconuts filled with gunpowder and a fuse, and hung them up in the trees so that they would detonate as the soldiers passed by. As earlier mentioned the mines have different designs, and they can resemble things like a hockey puck, or a seed from a maple tree. The BLU43/B, also called the “Dragon Tooth”, is a mine often found in Vietnam, Laos and Cambodia, and is produced in the USA. It weighs only 20 grams, and is only 14 mm high. It comes in different colours so it is easily disguised in the undergrowth, or simply on top of the ground. This mine is often found far from earlier combat lines, as it can be scattered by aeroplane, which makes it more dangerous for the local population. This mine is also difficult to remove, as it can not be removed by hand (Informant Rena,

4 http://www.gruntonline.com/NVAandVC/boobytraps1.htm
5 http://ndmic-cidnm.forces.gc.ca/landmine.asp?lang=e&LandmineID=391#
Anti-personnel, and anti-tank mines, are designed to detonate when exposed to a certain amount of pressure. The anti-personnel mine will detonate at a much lower pressure than the anti-tank mine, often as little as 3 kg. The anti-personnel mines can be divided into two groups; the blast mine and the fragmentation mine. The blast mine is hidden only a few centimetres below ground, and is constructed to detonate when the victim steps on the pressure plate. The pressure plate is a metal ring surrounding the top of the mine, and when stepped on it triggers the explosion. The blast mine is designed to break the leg of the victim into fragments, and this will cause further damage such as infections as it will bring debris from both the soil, the mine itself, and the clothing and footwear of the victim. The second type, the fragmentation mine, can be both bounding and ground based. These mines are filled with tiny glass or metal objects that will be spread out in all directions at great speed, and that can injure at a distance of 200 meters. The fragments can be spread in all directions, or they can be spread in one chosen direction. If the direction has been chosen, it is called a directional fragmentation mine. The bounding mine is the one often called “Bouncing Betty” or “Jumping Jack”. Only a small part of the mine is visible on top of the ground, and when stepped on it triggers a charge that will lift it approximately 1 or 2 meters up in the air before

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6 http://ndmic-cidnm.forces.gc.ca/landmine.asp?lang=e&LandmineID=391#
7 http://science.howstuffworks.com/landmine2.htm
it explodes. As earlier mentioned, this is designed to make most damage to the softest and most vulnerable parts on a human body, such as the belly and neck\(^8\). Most anti-personnel mines can be detonated by being stepped on, by trip wire, or by command.

![Image of PMA-2 mine]

(PMA-2.\(^9\))

The picture shows a PMA-2 Yugoslav anti-personnel anti magnetic blast mine. The mine requires 3 kg of pressure to detonate, contains 70 grams of explosives (Cromac 2004), and weighs 135 grams. It is 61 mm high, and 68 mm in diameter\(^10\), and it can be deployed in water and snow as it is water proof.

In Croatia the fragmentation bounding mine (PMR-2A, PMR-2AS), which looks like a corn cob, is very frequent along the former confrontation lines; along with the antimagnetic mine PMA-2.

![Image of PMR-2A, PMR-2AS]

(PMR-2A, PMR-2AS. source \(^11\))

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\(^8\) [http://science.howstuffworks.com/landmine2.htm](http://science.howstuffworks.com/landmine2.htm)

\(^9\) [http://science.howstuffworks.com/landmine2.htm](http://science.howstuffworks.com/landmine2.htm)


The colour of the PMA-2 used in Croatia makes it hard to discover as it is green and white, and relatively small. Magnetic mines, as opposed to the antimagnetic mines, are often anti-tank mines equipped with an electric device that will react to a certain amount of metal in its proximity. This often means that they react to tanks or civilian cars, and will detonate when the vehicle is above the mine. The explosion will be at the most vulnerable part of the vehicle, which is right under it, where it will cause the most damage. The electric device will only last for about 60 days and nights because it is run by battery. After these 60 days, it will only detonate by pressure (Informant Rena). Examples of a fragmentation mine, a blast mine, and a bounding mine:

P5 Mk1; directional fragmentation mine. M49; pressure activated blast mine. Wood casing. BM/85; bounding fragmentation mine.

(Source of all three pictures\textsuperscript{12})

The directional fragmentation mine is also called a Claymore sector mine.

The pressure activated blast mine with the wood casing has the ability to deteriorate after a certain amount of time. This only applies to the casing, however, as the explosives will still be active for some time. Being exposed to different weather conditions, it will become unstable and more difficult to remove as time goes by.

An anti-tank mine does not react to the pressure of an individual stepping on it, as it requires a heavier weight to detonate. Usually the weight required is from 100 kg and up. The anti-tank mines are constructed to stop tanks and other heavy machinery. It can be emplaced in different types of minefields, and also on paths, roads and bridges. All anti-tank mines are blast mines as their purpose is to destroy as much as possible of the body of the tank. The mines are powerful enough to destroy a tank, kill the persons inside of it, and persons standing by\textsuperscript{13}. The size of the mines are considerably bigger than the anti-personnel mine, they contain more explosives and are also easier to detect.

\textsuperscript{12} http://ndmic-cidnm.forces.gc.ca/landmine.asp?lang=e&LandmineID=88
\textsuperscript{13} http://science.howstuffworks.com/landmine2.htm
Some anti-tank mines can be equipped with a tilt rod. This tilt rod can be about 50 cm tall standing on top of the mine. When the mine has a tilt rod, it is easy for a person to detonate it by accident because it then only requires a few kilos pressure on the rod, to any side, before it will go off (Informant Rena). This makes it an anti-personnel mine, with maybe 1.5 kg of explosives. It will kill the victim.

**Injuries**

Injuries by anti-personnel mines can be categorized into three groups; from standing on a blast mine, from detonating a bounding fragmentation mine, and from handling a mine. The three groups give three different types of injuries. The first one will cause the loss of a foot, and amputation is typically needed to hinder infections and to be able to fit prostheses. The second group causes injuries to the soft tissue, the stomach and neck, while the third group most often causes head injury and injuries to fingers and hands. A blast mine does not need to contain much explosive to cause grave injury. When a foot puts pressure on a mine, the shock from the explosion, even though it is a small explosion, will travel up the leg and splinter the bone into tiny pieces. The victim may lose a few toes, and the leg will be beyond healing from the splintering. Amputation is the best alternative for recovery (In.c.).

An amputation gives phantom pain which again is a huge problem for landmine victims as these pains hinder the fitting and use of prostheses. Being without a prosthesis

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14 http://science.howstuffworks.com/landmine2.htm
15 http://www.nda.ox.ac.uk/wfsa/html/u11/u1120_01.htm
hinder the victims in leading normal lives and this causes both considerable physical and mental problems. The physical problems hinder the victim in being able to earn an income, and this can lead to a feeling of inferiority. It can even in certain instances lead to ostracism from the community as physically disabled persons are looked upon as unequal and of less value.\footnote{http://www.nda.ox.ac.uk/wfsa/html/u11/u1120_01.htm}

Having a mine related injury means years of medical care. The prostheses may need repairs and changes, and for children it means fitting new prostheses every six months as the skin and bone continue growing. This means that the landmines not only causes immediate problems, they continue to keep the affected population suffering from injuries, which makes it harder to earn an income, to grow land, and the injured will very often feel that they are useless. They will often be scared and insecure, and therefore end up having psychological problems to deal with in addition to the physical injury (Bottomley 2003b).

Croatia

Croatia became a state party to the Mine Ban Treaty (MBT) in 1999 and has since then been active in the global work to ban anti-personnel mines. They managed to destroy their stockpile of almost 200,000 anti-personnel mines about 6 months before the dead-line set in the MBT. After that the Croatian government organized the “Farewell to Arms” program, and collected approximately 20,000 mines from civilians. There are discussions as to if this program should be re-started because of the possibility that there are more landmines and other munitions in the hands of civilians (ICBL 2004). Kosovo introduced a month long weapons amnesty in order to collect the weapons and mines from civilians. This was not a success, and has been attributed to the uncertain situation in the country. There are still tensions between the different ethnic groups in Kosovo (ICBL 2004). Croatia has a dead-line for being mine-free by 2009, but there are different opinions as to whether or not Croatia will manage to keep this dead-line. Some Cromac (Croatian Mine Action Centre) officials see no problems in meeting it, while others, and NPA officers, can not see this happening. They might manage to be impact-free, or risk-free, but the chance of being mine-free is small. Croatia’s land-area is 56,542 km², and the affected area as of September 2004 is 1,350km² (Informant MV), and Croatia is now barely coming out of the Top 10 most mine affected countries in the world (Informant PC). Cromac is participating in a general survey that most likely will reduce the suspected area because rivers, houses, and lakes will be calculated as
mine-free areas, and therefore removed from the map (Informant MV). In doing this Croatia will have better estimates of how many mines and mined areas there are, and it will be easier to assess the impact and risk the mines represents. Even though Cromac has worked hard to remove the threat of landmines by organizing clearance, and by giving mine risk education (MRE) to thousands of people, mines are still used in criminal activities in Croatia (ICBL 2004). Since Cromac is a state institution, one would think that government land and infrastructure would be the main concern for the government and Cromac to clear, but Croatia is well aware of the problems faced by the local communities and has therefore created a system that takes the local communities seriously (ICBL 2004, Informants NM, PC).

Summary
Since the first landmines were produced there has been a huge increase in the types of mines made and the injuries they sustain. They have become more and more cunning over the years, and eventually they have led to a humanitarian crisis. Most anti-personnel mines are not powerful enough to kill their victim, but they will give the victim wounds that will make him or her, disabled for life.

As mentioned, the mines know no boundaries, and have been deployed, produced, transported or stockpiled in most of the world’s countries. They are most often used in third world, or communist, countries, but are also seen to be used by rich western countries such as Finland and the USA. This deployment of landmines has turned into a problem that hinders development of the affected countries, and threatens economic and social well-being for the population. The problem will not go away by itself.
One of the greatest efforts to combat the world’s mine problems is the Mine Ban Treaty (MBT). This treaty has managed to get a global ban on landmines with only a few nations not being members to it, and some of those who are not members have taken actions in accordance with the treaty towards a mine-free world. It has also led to the number of states producing mines being drastically reduced because of the publicity surrounding their production, and the investment community in several countries world-wide has stigmatized the production of landmines. This has not only reduced the number of mines being deployed, it has also practically ruined the market for selling, buying, and transferring mines. In spite of this, there are still non-state actors that continue to have access to mines through illegal production and selling, and who use them in war- and conflict situations, in terrorist acts, and in some instances in criminal offences (ICBL 2004).

In addition to this attention given to the issue of landmines, the international community has been more attentive towards what is being done with the situation, and how the injured and traumatized victims of this weapon are being dealt with. Because of the Mine Ban Treaty and the actions it has caused, the number of victims has been reduced from about 26,000 a year to approximately 15,000 to 20,000 a year (ICBL 2004). However, this number is not reliable as there are many countries with inadequate reporting mechanisms. Since the beginning of the invasion in Iraq, there has been a drastic increase in the number of accidents caused by anti-personnel mines in the country. The USA has denied deploying anti-personnel mines in this conflict, while Iraq has deployed both anti-personnel and anti-tank mines in addition to Improvised Explosive Devices (IED) that will detonate both by command techniques and by victims. The victim-activated IEDs are prohibited by the Mine Ban Treaty (ICBL 2004). IEDs are both easy and cheap to make, and easy to get hold of.

The Mine Ban Treaty
The International Red Cross was the first humanitarian organization to take notice of the problems landmines represented, but it was not until the 1990s that it became a global agenda. The Mine Ban Treaty is the result of several Non-Governmental Organizations (NGOs) working in areas with landmines. After having worked in mine-infested areas, and lost colleagues to the weapon, NGOs in these areas wanted to put an international focus on
the problems caused by landmines (Matthew 2004). These organizations saw the landmines as, among other things, an obstacle to their work, and

as exacerbating regional conflicts, hindering post-conflict reconstruction, seriously undermining infrastructure, and denying land to civilian use (Rutherford 2004:52).

Bobby Mueller, a Vietnam veteran who established the Vietnam Veterans of America Foundation (VVF) saw the need to address the mine problem through a widespread campaign to ban the use and production of landmines. In October 1992 the VVAF met with the Handicap International (HI) and the British Mines Advisory Group (MAG), among other humanitarian organizations, and they established the International Campaign to Ban Landmines (ICBL). The ICBL wanted to accomplish two things. First they wanted to educate the public about the dangers of landmines, to mobilize support, and to put pressure on governments, and second they wanted governments across the globe to work together for a global ban on landmines (Matthew 2004). In September 1995 the HI managed to get the French president, Francois Mitterand, to call for a Review Conference on the Convention of Certain Conventional Weapons (CCW). This convention was established in 1980 and has different protocols to address different types of weapons, and restrictions in their use. The Amended Protocol II addresses the issue of landmines. The government officials attending the meeting had no mandate to work for a global ban, and the conference turned out to be a disappointment to the ICBL (Matthew 2004). The ICBL saw the need for a restriction on the deployment of landmines, and they wanted recording and warning as to where the mines were laid, but the only thing they accomplished at the conference was a narrowed definition of what an anti-personnel mine is, and also a legalisation of the use of self-destructing mines (Monin and Gallimore 2002:23).

In 1997 the Convention Prohibiting the Use, Sale, Production, Transfer and Stockpiling of Anti-personnel Landmines, called the Mine Ban Treaty (MBT), was opened for signing in Ottawa, Canada17. During the same year the leader of ICBL, Jody Williams, was awarded the Nobel Peace Price in Oslo. In its first year the treaty was signed by 121 governments. In October 2004 it had 143 State Parties. In addition to this 9 states have signed, but not yet ratified the treaty, and in the whole world, only 42 states remain outside of it. Some of the countries that are not part of the treaty are taking important steps that are consistent with it, and this is a positive trend towards a total global ban on landmines (ICBL

17 http://www.cdi.org/friendlyversion/printversion.cfm?documentID=511
2004). Today there are about 1,400 different organizations involved in the ICBL, which has a loose structure that is seen as a positive trait by the member organizations (Goose and Williams 2004). The members of ICBL meet regularly to plan actions and make strategies, but the loose structure allows every NGO to choose to carry out actions that best fit their profile (Goose and Williams 2004).

The ICBL sees the 1997 ban to be the only framework for achieving a world free of mines, and proof of its importance can be seen in the marked drop in the use of anti-personnel mines since the 1990s and the implementation of the treaty. Anti-personnel mines have been used by fewer countries and also in lesser numbers since the treaty became a fact. This is compared to the years between the 1960s and the early 1990s, the period in which the use of landmines was at its peak. Another proof of the effects of the treaty and the work it has established is the marked drop in the number of mine victims (ICBL 2004).

**Problems with the treaty**

The Mine Ban Treaty has problems of definition which has created loopholes that jeopardize it. One problem concerns the definition of what an anti-personnel mine is. Many State Parties support the view of the ICBL that an anti-personnel mine is a mine equipped with “a fuze or antihandling device that causes the mine to explode from an innocent act of a person” (ICBL 2004:23) and that this makes it an illegal weapon. Other state parties, on the other hand, argue that it is the “requirement that the mine was designed to fulfil” (ICBL 2004:23), and not the consequence of the design that decides if it is an anti-personnel mine. The Norwegian Government is of the strict opinion that it is the text in the articles that gives the definition, and this definition specifies that an anti-personnel mine is a mine that will detonate by human contact. The Norwegian Government does not see the point in discussing other alternative interpretations to this definition as it is seen as being precise. Because of this difference in opinion and the unwillingness of the state parties to address it, mines that have been termed illegal can be redefined as legal. State parties that have destroyed their stocks of mines that initially was deemed illegal, can therefore experience that other State Parties define those mines as legal, and therefore keep them in their stockpiles for future use and export (ICBL 2004). This creates an off-balance relationship between the members of the MBT, and can, in the worst case scenario, lead to its demise.

A second problem with the treaty is the issue of joint military operations between states that are parties to the treaty, and states that are not. This is particularly so in the case of the United States of America who has not signed the treaty, and who frequently engages in
conflict areas and situations. The European nations do not often participate in military actions on their own, and when they do, it is often a joint action with the USA. Since USA is not a member to the treaty, they have the opportunity to deploy anti-personnel and anti-tank mines in a war situation. This affects the issue of national armed forces to decide the deployment of their forces (Chamberlain and Long 2004). This can cause problems for joint operations and the participating countries’ opportunities to decide what role to have during the operations because there are different attitudes in Europe as to how strict a line they will follow towards this problem. Some countries will not participate in any actions involving landmines, even not in the planning of using mines, while other countries, such as the United Kingdom, have admitted to participating in joint operations where anti-personnel mines have been used (ibid).

After becoming signatory to the Mine Ban Treaty (MBT) the countries declaring a stockpile of mines have a time limit of 4 years to destroy the mines not retained for the purpose of training and research. Most countries who are members of the treaty have a limited number of landmines for this purpose, and most of them report on the intended purpose of those mines each year. Sweden has reported on the number and purpose of mines retained, but there is a private company in Sweden which also has mines, and this company has not reported its retained number. This unreported number increases the total amount of mines in Sweden (ICBL 2004). The reported number of retained mines in this Nordic country is 15,706, which makes it one of four state parties containing one third of all retained mines in the world today (ibid). A problem with retained mines is, according to the Landmine Monitor Report, that at least 26 states did not consume or spend any of the retained mines in 2003. They have no stated plans of intended and actual use (ICBL 2004). The unreported number of mines in the Swedish private company can also indicate secrecy as to what the mines are for. In addition to this Sweden has recently started research on a new type of explosives that will deteriorate after a certain amount of time\(^\text{18}\) as it will be broken down naturally. The Swedes claim that this explosive will not be used in anti-personnel mines, only in anti-tank mines. This research is of concern to the international community as to how it will affect the MBT, because if they manage to develop this kind of explosives, the landmine could again be an accepted weapon. Sweden is a member of the Mine Ban Treaty and therefore can not produce landmines, and can not participate in deploying mines. Another worrying aspect is that they have an information cooperation with the USA about this new kind of explosives. USA is not a member of the MBT, but they have signed the Convention on Conventional Weapons

\(^{18}\) http://ips.idium.no/folkehjelp.no/?module=Articles;action=Article.publicOpen;ID=1808
(CCW) Protocol II which restricts the use of landmines, but does not forbid it. What this cooperation means is uncertain, but it might mean that they prepare exports to the USA, which is forbidden in the MBT\textsuperscript{19}. In addition to this Sweden has increased its stockpile of landmines in recent years, in contrast to the other state parties (ICBL 2004).

These problems of definition, and the development of explosives that will deteriorate after a certain amount of time, threaten the Mine Ban Treaty because it opens up for legalization and extended use of mines. Because of the limited use of landmines, nations try to develop new weapons that will give them the same benefits in war as mines have given them earlier, but which will not represent the same threat towards the civilian population. Some of these weapons may resemble mines in the deployment, and the development of new types of landmines proves that it is a weapon military forces are unwilling to let go. The number of countries who do not report on the use and plans of stockpiled mines proves that the treaty and ICBL still have work to do. Another paradox is that the world’s greatest armies (the USA, China, Russia among others) are still not members to the treaty. Countries that for years have tried to be first when it comes to developing army strategies and weapons still rely on landmines. The cold war was a result of an armament period, and there are speculations as to why the USA invaded Iraq. Some believe it was to show force towards China (Monin and Gallimore 2002). The MBT and ICBL also have to struggle to keep the international focus on the work they are doing as many see it as already done because of the signing of the treaty (Willerman 2004).

During 2003 a total of 149 million square metres were cleared in the world. 174,167 anti-personnel mines, 9,330 anti-tank mines, and 2,570,200 UXO were found. These numbers have to be read with some caution as many countries have an insufficient reporting method, and therefore there are inconsistencies and incomplete reporting of clearance results (ICBL 2004). The reporting methods are improving, but are still far from perfect in giving a correct number of found items. In most cases, there are much higher numbers of Unexploded Ordnance (UXO) than there are landmines found in cleared areas. This does not mean that the UXOs are more important to remove than mines. In every area of war there will be a high number of UXOs. The difference between the UXOs and the mines is that the UXOs lay on top of the ground and are easier to spot than landmines. They are easier to recognize and they are bigger, and therefore they are much easier to avoid for the civilians, and to remove for the professionals. The landmines are smaller, and they are hidden in the ground and therefore

\textsuperscript{19} http://ips.idium.no/folkehjelp.no/?module=Articles;action=Article.publicOpen;ID=1808
difficult to detect. If you stand on a hidden landmine it will take your foot off if you are lucky, whereas a UXO is not going to hurt you as long as you do not touch it. That is why the landmines represent a bigger threat than the UXOs, and why it is more important to concentrate on them. If the mine clearing personnel are supposed to remove all UXOs in a contaminated country, they will never finish. The number and spread are too significant for them to be able to handle within a limited time-frame. That is also the reason why mine clearance should focus on clearing mines and not on removing UXOs (Informant PC).

When a state has joined the Mine Ban Treaty it has a time limit of ten years to clear the ground for landmines. Unfortunately many states do not have the opportunity to be mine-free at the end of their time-limit, and therefore they try to concentrate on the areas that are high-impact. High Impact Areas are areas where there is a high risk of people being injured or killed, and areas that are important in terms of industry and infrastructure. States with a high extent of High Impact Areas will concentrate on being impact-free or risk-free instead of mine-free. The Norwegian Government is of the opinion that it is not good enough to be “risk-free” as the MBT clearly states that the objective is to be mine-free (ICBL 2004). The NGO “Perspective on the Debris of War” met in February 2004 and stated that due to the costly and complicated mine action programs “the obligations of the MBT can not be met” (ICBL 2004:644). This can mean that it is important to look at the objectives of article 5 in the treaty, and maybe redefine them. Article 5 requires destruction of “all anti-personnel mines in mined areas” (ICBL 2004:34). Whether this objective of a mine-free world is economically achievable has been discussed, and the United States sees the objective as “unnecessary action regardless of whether or not the mine generates any adverse impacts or poses a threat to civilians” (ICBL 2004:35). According to this it would mean that it should be enough to mark and fence off areas that are mined, and not stress the need to be finished clearing within the specified time. Many countries will have a hard time reaching the goal of being mine-free within 10 years mainly because of the number of mines in the ground, and the economy needed to remove them. Most of the mine-affected countries are poor, and in need of international aid in some form or another. There were speculations as to if the recent tsunami disaster in East-Asia, Christmas 2004, made the mine situation in Sri Lanka considerably worse as the waves could have relocated and moved several mines. It was later proven that there had been no significant movement in the minefields, and the clearing of mines can commence as soon as the devastation from the tsunami has been cleared up. It is difficult to say whether the USA thinks of the clearing of mines as unnecessary in itself, or if it is the goal of a mine free world that is unnecessary. It is a fact, though, that mines are
difficult to detect and therefore can be around for years after a war. In Norway people still find sea mines from the Second World War that are still dangerous and this means that it is not a waste of time trying to remove them. It is a time consuming process, and the world may never be completely free from landmines, but this is not a reason to stop trying to remove as many as possible. In January 2001, the American President Bill Clinton described the US position towards the Mine Ban Treaty as:

Our goal has been to end the use of all anti-personnel landmines outside of Korea by 2003, and we have aimed to sign the Ottawa Convention by 2006 if suitable options can be found that will allow us to maintain the war-fighting capability and safety of our men and women in uniform (Matthew 2004:9).

USA has now set back the original plan of becoming a state party to the MBT in 2006, and has stated that they will keep mines that are self-deactivating and self-destructing in their arsenal indefinitely (ICBL 2004:35).

The reason countries have for not joining the Mine Ban Treaty is often the need for having a defence weapon. Finland has postponed their joining the treaty until 2012 because they see the need to be able to protect their border against Russia. The Russian Federation has not signed the treaty, and is not a signatory to the CCW either, and there is a history of war between Finland and Russia. Finland has a fear of invasion from Russia that hinders them in signing the MBT. Russia has deployed anti-personnel mines in, among other places, Chechnya (ICBL 2004), and the terrorist-actions in Beslan in September 2004 proved to the world that anti-personnel mines are still in circulation, as the terrorists used anti-personnel mines inside the school they had taken hostage. Also, when looking at the list of countries who have not signed the treaty, the typical country is either undemocratic, post-communist, or for some reason threatened by, among others, the USA. Some of these countries have a history of violence and conflict, and this is one of the reasons why they see a need for protection.

The ICBL is not just a “committee” wanting to remove landmines across the world and passing legislations. They serve as a control mechanism and represent the wider international community in conferences and conventions. The ICBL has people travelling the globe and collecting information about the mine situation in each mine contaminated, and not mine contaminated, country and state, and uses this information to cross-check the information the different national delegates share with the rest of the world. If this
information is inaccurate, the ICBL will confront the delegates and make them answer to the
conference or convention they are at (Informant KR).

Why have a ban?
Having a global ban on landmines is important as it reduces the use of the weapon, but it will
not help the situation in an affected country if the mines already deployed are not removed. A
ban does not make it safer to live in a mine-affected area. Attention given to the problem has
made it easier for the different nations to get financial support, and the aid of international
NGOs specialized on this issue to cope with the problem. It has led to more focus on those
injured by landmines, and easier access to professional help. This makes it possible for those
injured and handicapped to regain their quality of life and their ability to support themselves
and their family. In Eritrea a young farmer stepped on a mine and lost his leg while herding
his cattle. Because of cooperation with the Norwegian Handicap Society, he was able to get a
prosthesis and has since then gained respect in his village, got married, has five children, and
he is able to work his land and feed his family\textsuperscript{20}. In most of the mine-affected countries in the
world, the rural areas, where the farmers are dependent on their land, are affected the most.
These areas also have the longest way to a hospital that can give the proper treatment. The
farmer in Eritrea was, for instance, conscious the whole 90 minutes it took to carry him to the
road, where a passing car took him to the hospital\textsuperscript{21}. The level of aid in mine-affected
countries has increased, but there are still problems when it comes to covering all affected
areas. The problems of geographic distance, infrastructure, affordability, and the quality of the
hospitals are still significant even though there have been improvements during the last years
(ICBL 2004). Many of the survivors of mine-accidents do not have access to the basic
necessities in life, and are, together with other persons with disabilities, considered as the
most impoverished group of people in many societies. After the mines have been cleared,
there will still be survivors in need of assistance for many years to come. According to the
Landmine Monitor Report (2004), 121 countries in the world are to some extent affected by
survivors from landmine accidents. Even countries that are not directly affected by landmines
have mine-accidents survivors. These survivors are both tourists and international aid workers
who have been injured while abroad. Countries with a mine-problem should, according to the
report, have assistance to survivors as part of the countries’ health program. The MBT is the

\textsuperscript{20} http://www.vg.no/pub/vgart.hbs?artid=101342
\textsuperscript{21} http://www.vg.no/pub/vgart.hbs?artid=101342
first treaty banning a weapon that calls for assistance to the victims of the weapon, in history (ICBL 2004).

The Mine Ban Treaty is careful to look at all aspects of the mine problem, and tries to influence governments all over the world to act according to the treaty and to make the necessary steps towards a world free from mines and give the victims the proper treatment and the opportunity to lead a good life in spite of their injuries. There has also been an increasing understanding among states that getting assistance as a mine victim is not just a matter of rehabilitation; it is also a matter of human rights.

Summary
The Mine Ban Treaty is a big step in the right direction when it comes to removing the threat of mines. It has come a long way, but even though it has provided the world with a moral view against landmines, and an international ban, it still has a long way to go. The problems of definition have to be put to an end as being able to define the treaty’s definitions in one’s own favour, is damaging to the treaty.

In spite of these problems the ban and the treaty has reduced the number of people being injured by mines by a couple of thousands by providing basic information to the affected populations, by doing national surveys and marking and fencing many of the affected areas. In time it might be able to remove the threat of landmines all together.
Chap. 4: Differences in Mine Clearance

Mine Clearance

Mine clearance consists of more than just removing mines. Before a demining team can begin removing mines, they must undertake some surveys. These surveys are the general survey and the technical survey. The general survey involves no machines or technical devices. It involves observation and communication with the local population. By looking at areas that are mine suspected, the deminers will see if the land is in use, and if it is, where it is in use. The local population has important knowledge as to where the mines are, and can also help eliminate certain areas (In.c.).

The technical survey is conducted with machines. In this case there is often a big area that is suspected to contain mines, and the Mine-Cats, for example, will be driven across this land, until it hits a mine. The mine either explodes or is destroyed by the flails in front of the mine-cat. This first mine marks the beginning of the mine field. After hitting the first mine, the mine-cat changes its direction and goes left or right from where the first mine was found. The technical survey will end up in an area that has been marked and fenced off and added to the areas that are mine contaminated, and will be proposed as an area in need of clearance. The technical survey is a means of clearing mines also, in addition to surveying (In.c.).

After doing these surveys, the clearing can begin. The mine clearance is conducted in three ways. First you use the mine-cat, then you send in the dogs, third you use manual deminers. The machine will, as mentioned, detonate or just destroy the mines, making it safer for the clearing teams, and easier to find the mines. The dogs will be sent in with their handlers. By being able to smell the explosives, the dogs will mark off the mines that have not been found by the machines, and the mines that have been thrown up on top of the soil. The manual deminers go in and disarm the mines, or mark them off if it is a kind of mine that requires Special Forces, from the police or army, to disarm. When destroying the mines, the mines are collected and brought to an approved location where they will be detonated safely. One rule is that the dogs always go in second. In areas where it is impossible to use the machines, the manual deminers enter the area first, and clear the mines they find, and then use the dogs for a second going (Informant PC).
Clearance techniques

As mentioned, clearing mines can be done both manually and mechanically. The manual clearing is the only method that gives a safety of approximately 100%, and is therefore always used. When deminers clear an area manually, they use a certain set of tools; a metal detector, a prodder, a knife, and a small spade (Bottomley 2003b). The hand-held metal detector is used to locate the mines in the ground as it responds to the metal content in the mines. A problem with metal detectors is that they do not only respond to the metal content in the mines, they also respond to metal shrapnel in the soil. Because of the amount of metal in the soil, using a metal detector is time consuming as the deminer has to dig out every piece of metal he finds. In Croatia a deminer had solved this problem by attaching a magnet to his spade so that the metal would stick to it, and he would save time digging out the metal (observed). Another problem with metal detectors is that many mines have very little metal content, so the deminer has to be careful when selecting the sensitivity of the detector to make sure it does not overlook any mines (Bottomley 2003b). When the detector has located a metallic object in the ground, the spot is marked, and the deminer gets on his knees with his prodder. A prodder is a long metal rod used in order to identify the objects in the ground. It is to be put in the ground at a 30 degrees angle. This angle is the safest one, as the prodder will not touch the top of the mine and detonate it, and it will most likely not slide under the mine. When having identified the object as a mine, the deminer uses a knife and spade to carefully remove the soil around and on top of the mine, and in that way dig it out of the ground (Bottomley 2003b).

One way of reducing the amount of metal being dug out of the ground is to use dogs that are trained to smell explosives. Mine dogs are used in many countries, among them Croatia and Cambodia. In Croatia the dogs always go in a mine field as number two if the area is suited to using dogs. The deminer will then mark the spots where the metal detector registers metal, and the dogs will go in and mark the areas where the metal contains explosives (Bottomley 2003b). A problem with dogs is that they are not as reliable in densely mined areas, and that they can have a bad day the same way as humans (In.c.).

The machines used in mine clearance are of varying quality and shape. Some of them have manual steering, where the driver is located at the back of the machine, and others are steered by a remote control. The driver, in these cases, is located inside an armoured car at a safe distance. Using machines helps to remove bushes and tall grass that would hinder the work of the deminers, and they also smash the fuse off the mines, throw them on top of the soil, detonate them, or in other ways destroy them. They enhance the safety for the deminers. A goal is to develop machines that can replace the manual method, both in order to enhance
safety, and in order to speed up the clearing process. The problem is that so far, the machines do not have the ability to clear an area well enough for it to be 100% safe (Bottomley 2003b).

There are differences between the Norwegian military clearance on the one hand, and the NPA and commercial companies’ clearance on the other, when it comes to the routines when finding a mine. The NPA and the commercial companies have trained their deminers to disarm different types of mines while they are still in the soil, and also to remove the mines and disarm them at a safe place (In.c.). The military has no training in disarming while the mines are in the soil, so what they do when they find mines is to attach a device that allows them to jerk the mine out in the open from a safe distance, and then later on have the mines detonated or disarmed by professionals (Informant Rena).

The clearance techniques are basically the same all over because of the International Mine Action Standards, but the mine fields can vary much from country to country and even between regions in one country. This is the case in Croatia. The two most mine contaminated regions in Croatia is the Knin region and the Slavonia region. Zadar county in the Knin region is the main clearing area for the NPA and it borders the Adriatic Sea, while Slavonia is an inland region bordering Bosnia and Herzegovina, Serbia Montenegro, and Hungary. These two regions have completely different patterns of mine fields. In Zadar the mines have been laid sporadically without any recognizable pattern, whereas in Slavonia the mines have been laid systematically and are easy to find. This affects the clearing in that clearing an area without any pattern can take much more time than a pattern-laid mine field because there are no indicators as to where the mines begin and where they stop. A team can clear an area the size of 5 hectares and only find one mine, whereas in Slavonia an area the same size can contain 100 mines, and the deminers will have strong indicators as to where the field starts and stops. The pattern-laid minefields have more accurate maps, and the minute you recognize the pattern, the mines are “like picking up potatoes” (Informant PC). These mine fields are most often anti-tank mines, and not anti-personnel mines. The randomly scattered anti-personnel mines are much harder to discover, and therefore it takes more time to clear a field of this sort.
The two figures show the difference between a pattern-laid mine field and a field where the mines have been scattered randomly. As earlier mentioned the pattern-laid mine fields most often contain anti-tank mines. These mines can be surrounded by anti-personnel mines laid out to protect the bigger ones from being removed (see figure 3).
There are many different patterns in minefields, most of them are laid by humans, but some of them have mines buried by machines. A big machine will dig holes in the soil, drop the mines and cover them up again with soil in a very short amount of time, allowing a great number of mines to be laid quickly (Informant Rena). In addition to these ways of laying mines, there is the use of aircrafts. The mines will then be dropped from an altitude that will allow the mines to be armed as they hit the ground, but they will not detonate. Clearing an area where mines have been air-dropped means finding many mines in a huge area, laid without any pattern. Some of the mines will be destroyed when they hit the ground and some of them will not even be armed. The mines are most often armed by the crash when they hit the ground (Informant Rena). The uncertainty in if the mines have been armed or not, make them dangerous to remove as they can be very unstable. An example of an air-dropped mine is the “butterfly mine”, as earlier mentioned. It is designed to fly over great distances and in that way create large spread in the mines dropped. This leads to more work removing them as there is no clear evidence as to where the mine fields begin and end.
Different objectives and methods in mine clearance

As mentioned in previous chapters, the NGOs do mine clearance as one part of mine action in order to help the local population sustain a normal way of life. The objective of the NPA mine action is

  to facilitate, support and contribute to a sustainable improvement of the socio-economic living conditions for target populations in mine affected areas (Informant PC).

This objective is not shared by, for example, military clearance teams\(^22\), and other public instances such as the police, fire department and commercial companies. The statement is that the only objective of commercial companies and private companies is to make money. It is important for the NPA not to get too involved in commercial projects as long as there are no immediate benefits for the local population. If they are asked to take on a project that will give one person a huge economic benefit, they will hesitate as long as that person has no plans of hiring people from the local community and give them the opportunity of having some income also. They try to reach the ones that need help the most, both when it comes to clearing a field, and when it comes to reconstructing homes, or getting the extra equipment needed to cultivate a newly cleared field (Informant PC, ZR).

Military clearance

In the early days of mine clearance clearing mines was a military job and when clearing in populated areas, military methods were used most of the time because the military was already in the areas due to peacekeeping missions. When clearing, the military performs operational clearance, which means clearing for access to roads or safe passage through a mine field so that the UN and other agencies can continue with their work (Bottomley 2003b). Military clearance does not have the strict regulations on total clearance and safety in an area as other demining organizations do. The objective is to clear a path in a mine field through which you can transport vehicles and soldiers safely. Outside this path the mines remain and the area is not safe for the local population. Army personnel are disposable and the area they clear is most of the times out of reach for the local population. They also clear airstrips and military compounds. As an informant told me, an area is clear when it is “good enough” (Informant Rena). Military mine clearance is designed to be implemented during war, and they therefore have a different emphasis on safety than humanitarian mine clearance. They aim at maybe having 80% safety in an area, whereas the humanitarian clearance aims at

\(^22\) When I speak of military clearance, I speak of information gathered from Rena Military Camp in Norway.
Commercial companies also joined in on these clearance activities which had no focus on the impact the clearance would have on the local population (Bottomley 2003b).

When it comes to the protective equipment the deminers use, there seems to be a great deal of difference between the Norwegian army and the mine clearing teams in Croatia, both the NPA and commercial companies. In Croatia the government has strict rules as to what equipment the teams are supposed to have. There are different brands and versions of vests designed to protect the user from fragments caused by an exploding mine or shell (I choose to call them “protective vests”), and metal detectors, but the equipment has to be approved by Cromac.

The Norwegian Military also has strict rules, but they are more lenient with each soldier’s preferences. They have more equipment to choose from, and as long as the deminer is wearing a protective vest and helmet, a protective jacket and pair of trousers are optional. Protective jackets and trousers were not mentioned to me in Croatia when we talked about equipment. The reason why this is optional in the military is because of each soldiers’ preferences when it comes to being and feeling comfortable doing their job (Informant Rena). In warm areas wearing a padded jacket and trousers can cause more pain than good, the deminer may become unfocused, and in addition to the weight of the equipment it will give the deminer awkward and limited movements. Being focused is the most important part of demining. If you lose focus, you can get injured or killed. Because of this the military has rules as to how many breaks a deminer shall have during a day, and also that if the deminer has a bad day and does not feel fit for working, he can take the day off. A soldier can work for one hour straight if he wishes, but taking a break every 20 minutes is recommended. Another difference between the Croatian mine clearing and the Norwegian military, is the footwear the military has at its disposal. The footwear consists of big cushions the soldiers put on their feet, and which equalizes the pressure and makes it safer for the soldiers to move around in a contaminated area (Informant Rena). These cushions may not be recommended to wear in a rough terrain with undergrowth, as it may be easy to trip and fall, and in that way cause an explosion. Another difference between the Norwegian military and the NPA demining is that when the army clears mines, there are two persons in the same “street”, where number two is following in number ones’ footsteps. The soldier who walks first uses a metal detector. When he discovers a mine, he will give the metal detector to the soldier following him, and he will get the equipment and tools needed in order to dig out and detonate the mine (Informant Rena). This cooperation is not usual in the humanitarian clearance in Croatia. When military personnel discover an anti-personnel mine it is to be detonated at that location and only one
mine is to be detonated at a time. If the discovered mine is located where a detonation can cause injuries or by any other reason should not be detonated, it is to be disarmed and removed to a safe place for later detonation. The disarmament of a mine is to be performed by a trained officer (Overkommando 2004-2005).

Commercial clearance
The difference in objective between humanitarian clearance and commercial clearance was remarked in Croatia by an informant as he said that the commercial companies mostly hire former soldiers to do the clearing. They know where the mines are, they know how to handle them, but they have no interest in how it impacts on the local population. As long as they get paid to do a job, it does not matter whether they are clearing a backyard, a schoolyard, or an abandoned factory. The companies have no way of assessing the need for clearance in an area, and they do not have the opportunity to turn down a task because they get paid for each task they do. If they are supposed to make needs assessments before every task they are offered to take on, they would lose a lot of money, both in that they would need to hire survey personnel, the operation would take much more time to finish and they would therefore lose the opportunity to clear as many areas as possible. The more areas they clear, the more they get paid. Because of the competition between the different commercial companies in Croatia, in 2001 and 2002 the companies had to dump their prices in order to get as many projects as possible, and at one point the price was only 3 or 4 kuna per m² (Informant NM). This led to a loss of quality in the work they did, and the local population experienced the consequences of this more than once. When the companies do not take the clearing seriously, the local population will suffer injuries. Because of this lowering in prices and loss of quality in the work, Cromac introduced quality assurance inspectors whose job it is to check the work that has been done, check the equipment it has been done with, and also to give certificates when an area is declared safe for use (Informant NM).

The NPA relies heavily on community liaison, which will be discussed later in the thesis. Commercial companies do not have this liaison, according to the NPA, because they only do demining, and not mine action. “Demining is just one small part of mine action. Demining is just putting dogs, machines and people on the ground to clear mines, that’s what demining is. And in general, that’s what commercial companies do” (Informant PC).

23 Norway as a State Party to the MBT does not use landmines in military operations, and does not possess landmines for other purposes than training and research.
Humanitarian clearance

Humanitarian mine clearance saw its first light in the late 1980s as a response to the attention given to the mine problem in Afghanistan. It represented a turn in demining as it changed the focus from operational clearance to community-oriented clearance (Bottomley 2003b). The basic reasons for clearing became humanitarian needs, the return of land for productive use, and the reduction of the risk faced by people living in contaminated areas. This goal of humanitarian clearance still stands strong today in the NPAs work. Later on the activities performed by the humanitarian demining teams was gathered under one term called “Humanitarian Mine Action” (Informant PC).

An important part of the NPAs mine action is communication with the local population. This allows the villagers to know what is going on, what the NPA is doing, when they are doing it, and where they are doing it. This gives the civilians a sense of security and trust towards the demining teams, and it also helps the NPA get information as to where the mines are. Community liaison is part of the survey process that the NPA performs before taking on a task. This is important for them because they get to know the population and their needs, and in that way they can choose to take on a project if it fits their organizational objective. The NPA has tried to implement liaison into the work of the commercial companies, but they do not seem to have any interest in having it incorporated (Informant PC, BG). It takes too much time, and as earlier mentioned they get paid by each m² they clear, not for communicating with the local community.

Another difference between the NPA and the commercial companies is as was said, that the commercial companies only do what they are paid to do, while the NPA wants to finish an area completely before moving on to the next project. That means you keep going until you no longer find more mines, not that you stop clearing when you have cleared the 20,000m² you were paid to clear. This has been the case with commercial companies. After they have finished a project and put up the fence to mark off the area that has been cleared, the mines still exist right outside the fence because they can not themselves pay for clearing that area. What the NPA wants to do, is to finish the entire area so that all of it can be given back to the local population. The reason they have the opportunity to do this is because they are self-funded. The Croatian state does not spend any money on the projects the NPA undertakes, contrary to the commercial companies, and therefore NPA has the opportunity, and the will, to take on projects that require more work to fulfil. “We can take those cherries on the top, because we don’t concentrate on the price for the demining” (Informant PC).
When it comes to the protective equipment in comparison with the military, NPA has a different angle to this. The protective equipment consists of the personal protective vest and helmet, and according to the law a working day is 5 hours long. During these 5 hours the deminers must have at least one 30 minutes break, but if they need more breaks, that is not a problem (In.c). They do not have padded jackets and trousers, and they do not have the cushion-footwear either. The line-up when clearing is also different. In Croatia the clearance teams work side by side. They line up “streets” next to each other, dependent on the terrain, that are 25 meters wide for safety and each deminer has his own “street”. The safety distance is 25 meters because the mine type that is most common has a killing radius of 25 meters. If a mine detonates, it will most likely only injure one deminer. The safety distance will be bigger if they discover mines with a bigger killing radius (Informants S).

A common feature among most mine clearing teams, both military, commercial and humanitarian, is that because of the danger the work entails, mine clearing is never carried out when it rains. This is one factor that hinders mine clearance in progressing as fast as one would wish. It is also impossible to clear mines during the winter because the frost in the ground makes it hard to dig out the mines, and the snow negatively affects the functioning of metal detectors. Even though it hinders the clearing, the winter protects the civilians because the snow makes it almost impossible to detonate a mine by stepping on it. If it lies loose in the snow, the mine will slide away under pressure, and not detonate (In.c.).

The NPA in Croatia

The Norwegian People’s Aid in Croatia tries to work according to their humanitarian objective and tries to implement this idea in the commercial companies and in Cromac. They clear areas according to both the International Mine Action Standards, and according to Cromac’s wishes. When going to work on a project, a demining team consist of 4 deminers, one nurse, one chauffeur for the ambulance, and one supervisor (Informant S). Going into a mine field requires that the nurse knows your blood type, your name, and how many people are entering the area (experienced). Each dog-team consists of 2 dogs and one dog handler (Informant S, In.c.). The NPA in Croatia has 4 dogs at their head quarters. They have one or two machines at their disposal and they use them whenever the topography of an area allows it. The machines cannot work under all conditions, and are therefore not present in all projects.
Humanitarian Mine Action

Humanitarian Mine Action in a project-country is temporary, and the aim is that the project will be taken over by the country’s government, or by the local community, and in this way contribute to a development project the local community itself can be in charge of. The process is that the organizations start up a project with some international personnel who will train locals in different branches such as mine clearance, finance, reconstruction and so on. During their stay in an area, the organization will employ more and more locals in different positions and after a while the organization will primarily be run by locals and the international personnel can go to another area or country. It is done this way so as to “enhance local capacity and the sustainability of the project” (Chamberlain and Long 2004:85). This holistic, development-oriented approach (ibid) is necessary to get the whole aspect of the impact landmines have on a community. Landmines not only install fear and limit the areas of safe movement; they also hinder the local community in growing their farmlands, herding their cattle and sheep, and collecting water and fire-wood. A community can be completely cut-off from their normal way of life and completely dependent on national or international aid. If the mines are removed the community will no longer be dependent on aid from the government to get by, because they will be able to grow their land, herd their live-stock, and more or less regain their economic independence. In Croatia the economy was often the mentioned reason for people wanting their farmlands cleared for mines. The farmers complained about being absolutely dependent on the extra food the land would give, and that they had a hard time getting by when they could not use the land.

Humanitarian Mine Action has become widely accepted as the best means to address the global landmine crisis (ICBL 2004:27).

Humanitarian mine action is not just about clearing mines. It involves all aspects of dealing with mines, including marking of mined areas, mapping of the areas, and clearing the areas for mines. It also includes Mine Risk Education (MRE) for all levels in the affected community, and quality assurance of the cleared areas. Commercial companies and many governmental organizations do not seem to have this action incorporated in the tasks they take on while other mine action actors do. This was evident in Croatia (Informant PC). The NPA has as the only Non-Governmental Organization (NGO) accredited by the Croatian Mine Action Centre (Cromac) to work with mines in Croatia, all these elements incorporated in their work. They are dependent on cooperating with the local communities in order to get and to give the information the different parts need. If they do not have community liaison, they
will not get information about where the mines are, and they will not be able to have the trust 
they need in order to make the right assessments of which areas to clear first. Without liaison 
they will have a hard time communicating with the local community as to where there are 
mines, what the locals should do if they discover a mine, and who they should contact 
(Informant PC). The NPA have a firm belief in community liaison. The NPA, as an 
an organization, depends upon the information the local population can provide as to where there 
are landmines, because many maps from the war are incomplete, and because of changes in 
the situation as some farmers remove the mines themselves. Communicating with the locals 
also helps the locals trust the on-going process, and to trust the result when it is finished. 
According to an informant, one of the differences between an NGO and commercial 
companies doing mine clearance is that commercial companies do not have this community 
approach. They will turn up on Monday and leave on Friday, without giving any information 
to the local population. As it is common for mine clearing actors to leave behind plastic 
markers when they leave, it is difficult for the local community to know if an area has been 
completely cleared (Informant: PC).

Mine Risk Education is an important step to reduce the number of accidents caused by 
landmines.

MRE seeks to reduce the risk of injury from mines/UXO by raising awareness and 
promoting behavioural change; including public information dissemination, education 
and training, and community mine action liaison (ICBL 2004:40).

There has been a significant increase in the number of people attending Mine Risk Education 
(MRE) since the implementation of the MBT in 1999. Landmine Monitor recorded MRE in 
63 countries in 2003 and 2004 (ICBL 2004), whereas in 49 countries there were significant 
programs. In recent years there has also been an effort to combine this program with the rest 
of mine action, and in some cases it has been successful. There are difficulties in getting 
access to all groups in the communities, as it is easier to find children and get their attention in 
the local schools, than it is to find mothers and fathers who are out working in the city, in the 
fields, collecting water, or gathering fire-wood. This is evident in that the typical mine-victim 
is male and in the age of 15-50 (Informant PC).

In 2003 in Sri Lanka, UNICEF conducted an evaluation of the importance of Mine 
Risk Education. It showed that in areas that received MRE 99% of the affected communities 
were aware of the risk mines caused, whereas in areas that had not received MRE there was a 
higher rate of accidents from mines and UXOs, and fewer people were aware of the threat and 
danger the remnants represented (ICBL 2004).
MRE is conducted by most NGOs in Croatia with the Croatian Mine Action Centre (Cromac) as coordinator. MRE is a way of teaching the local community how to act if they find a mine, what to look for, what the different mines look like, and also physically training people in how to act in different mine situations (Informant: BG, PC). The NPA gives MRE in the local communities they work in, and tries to reach every group of people. The group viewed as the most important one is children. All elementary schools in Croatia have MRE as a part of their curriculum, and in addition to this there are theatre-groups visiting schools and performing with messages about mines. This ends when the children reach the age of 15. Every child attending school in Croatia knows much about mines. Because of this extensive curriculum there are very few children in Croatia under the age of 15 involved in mine accidents (Informant: VT).

Marking mine suspected areas and discovered mines are crucial for the safety of the local population, and also for the safety of the demining teams. If members of the local population find mines, they first mark the area, and then they report the finding either to Cromac, the nearest demining team, or to the local police or fire-department. Areas that are suspected to be mine contaminated will be marked with warning signs and drawn into maps. Marking the areas is the best way to warn people about the risk, and keep them out of the area. After the war it was important for the Croatian government to regain the economy they had before the war, and one way of doing this was to reopen the tourist-business. If they were to get the tourists back, they could not have these warning signs everywhere, so they were removed. It was not until a few years ago the signs came back up again. The removal of signs caused a lot of extra work for the demining teams, both in surveying and marking (Informant: BG, PC).

When the NPA clears mines, they prefer to clear areas that are important to the local population, and that have a certain possibility of being put to use after the clearing is over. This is a typical trait of NGOs clearing mines. They do not entirely appreciate being out clearing projected power lines or highways if there are no villagers in the other end benefiting from it, they want to clear areas that are of use to people as soon as possible, and areas that will benefit as many people as possible and make them capable of leading a normal life (Informant PC).

Quality assurance is performed during and after clearance. A quality assurance inspector checks the cleared areas to see if the job has been done properly and that there are no mines left in the ground (Informant MV, IC). This work is important to hinder cutting of corners and for making sure there are no forgotten mines that can cause accidents after the
land has been returned to the owners. Croatia has developed a well functioning system that takes care of all assessments of cleared areas after experiencing, as earlier mentioned, a couple of years with commercial companies dumping prices, and accidents happening after land had been cleared. In Bosnia-Herzegovina a deminer was sentenced after having released land as cleared and safe, when there still were mines in the ground (Informant: BG, PC).

One more aspect of mine action is that of mine victim assistance. This revolves around providing the victims with proper aid in terms of hospital treatment, and aid facilities such as prostheses, crutches, and wheelchairs. The NPA has chosen not to participate to any significant degree in victim assistance as it is a very specialized field, and they want to focus on the surveying and clearing of mine fields. If there is an accident in their nearby area, they will assist in terms of providing help to get the injured person out of the mine field, and in transporting the injured person to the hospital (Informant MrM, PC).

Research

There is ever ongoing research considering how to improve the methods for finding and removing mines, to make it safer, cheaper and less resource demanding. One example of this research is a plant that is to turn red in contact with explosives and in that way reveal where the mines have been deployed\(^{24}\). Other examples are rats in Tanzania that are trained to smell explosives and mark off where they are. The rats are easy to train and they have diets that are cheap and easy to get access to\(^{25}\). Using rats instead of dogs can make it easier for the poor countries to get access to this resource as they are cheaper than dogs. There is also a smaller chance of accidents as the rats have a lower weight than dogs, and are less likely to detonate a mine by stepping on it.

Several machines that are designed to run over a mine field to find mines have been developed. Norway developed one of these machines called the Mine Cat. A problem with these machines is that they get destroyed by the stress they are exposed to relatively easily, and they are expensive to repair. Clearing an area can be set back quite a while if the machine needs repairing. In Croatia I went to a mine field where they used a machine designed in the Balkans, and while we were watching, the machine got broken. This machine is preferred by the NPA in Croatia because it is easier to maintain and cheaper to repair than the Norwegian model. The flails are the most exposed area of the machines, as they are the ones which get in contact with mines, rocks and undergrowth first. The particular machine used by the NPA in

\(^{24}\) http://www.siste.no/Innenriks/article856785.ece
\(^{25}\) http://www.bistandsaktuelle.com/Les.asp?ID=258
Croatia was steered by a remote control, with the driver sitting in an armoured car a certain distance away. Other mine machines are driven manually by a driver onboard. The remote control steering improves the safety of the driver considerably, thus reducing the casualty rate (Informant PC).

Countries worldwide spend large amounts on research connected to landmines, both in order to facilitate removal and detection, but also, as mentioned, in order to develop similar weapons that will not be illegal according to the Mine Ban Treaty. One problem is, though, that no matter how advanced the machines and technology are in clearing, the most reliable clearing technique is the manual.

Summary
In this chapter I have drawn lines between the different objectives in mine clearance depending on who is performing the clearance. Different objectives qualifies for different tasks. Military clearance is best suited for military areas such as airstrips, compounds, and for creating passages for vehicles and military personnel. Commercial companies clear the areas they are getting paid to clear, and competition between such companies can alter the quality of their work. Humanitarian mine action seems best fitted when it comes to populated areas with poor inhabitants who are dependent on their contaminated fields or pastures.

Even though there are differences in objectives, the methods are basically the same in mine clearance. There is ongoing research as how to develop a safer and more accurate method, but so far it seems that the safest and most accurate method in demining is the manual. Humans can easily make mistakes, but humans are also aware of the risk they take performing this work, and will therefore perform the best they can so they will not get hurt.
Chap. 5: Organizing demining in Croatia

Mine Action Centres
The first Mine Action Centre (MAC) was established in Afghanistan in the late 1980s, and turned out to be a success story. This is not the case in all countries. In Bosnia and Herzegovina (BiH) the MAC has had a totally different story. By the time the MAC came to BiH, the attention towards landmines had increased since Afghanistan, and there was a lot of pressure from different instances such as governments, donors and other international agencies towards the success of the centre (Kjellman et al. 2003). The clearing operations in Bosnia have been criticized from several parties both nationally and internationally for progressing too slowly. In the beginning of clearance, right after the war, the responsibility of clearing was given to the former warring parties. Some commanders were unwilling to hand over maps of contaminated areas, the motivation for clearing was not in place, and they were only given 30 days to complete the clearing of the entire country. The UN handed the BHMAC to the national government, and since then the clearance operations in Bosnia have been accused of being corrupt in relation to clearance contracts, that commercial companies have been cutting corners, and that NGOs in the area have been too slow, too cautious and inefficient, and in that way been wasting money. The number of commercial companies clearing land in Bosnia, in comparison with the small number of NGOs clearing, has resulted in huge unpopulated areas being demined while populated areas still live under the contamination of mines (Monin and Gallimore 2002). This resembles the situation in Croatia where the NPA, as the only NGO, is trying hard to clear areas where people live and are directly affected by mines. The Mine Action Centre in Croatia has been criticized earlier but has managed to turn the situation around and get a successful institution with the overall responsibility in every way. Even though some MACs are more successful than others, certain aspects are the same. Mine Action Centres have the authority to delegate tasks and areas to the different organizations demining, and they control all quality-assurance aspects of the clearing (Kjellman et al. 2003). The fact that not all MACs are efficient depends in large part on their ability to gather information and data that make it possible for them to prioritize the areas in need of clearance. In order to do this, they need maps and they need to perform surveys in order to reduce the suspected hazardous areas (SHA), and also to see where the need is biggest. Traditionally these surveys meant finding the areas with the highest number of mines, but because of the “quiet revolution” (Kjellman et al. 2003) taking place within the
demining community, there has been a change in attitude now focussing more on the impact of landmines on the local population. This change has come about after the ratification of the MBT. In addition to this change, it has also led to a moral belief worldwide that landmines are illegal weapons.

The Afghan success story has two main reasons. One reason is that when the Mine Action Centre for Afghanistan (MACA) was established they only used national NGOs to do mine clearance. Even though there was no stable government in the country, the national NGOs had the technical and managerial expertise to keep the mine clearance on a high organizational level. A second reason is that the landmine issue had not yet reached the media as the major topic it later became, and therefore the national organizations did not have to compete with international organizations in accommodating their preferences, and they did not have to compete for international prestige and resources. Because of using national NGOs, MACA has avoided the pressure of balancing the different agendas of national commercial companies and international NGOs, as can be seen in Croatia where the NPA has tried to implement their way of assessing tasks to both Cromac and the commercial companies without luck (Kjellman et al. 2003). There is criticism toward MACA also, in that they assert too much power over the NGOs and hinder the flexibility inherent in their capacities, and they are reluctant to loosen their control. In Croatia the NPA has managed to get some goodwill inside the state and Cromac and therefore they have the opportunity to choose which of the tasks they wish to take on, even though, according to two informants, it has not been an easy process (PC, BG). Being able to choose which tasks to take on does not mean that their way of assessing the impact of mines, and in that way choose their priorities, has had any effect on the commercial companies and the government.

**Cromac**

In 1995 the UN established their Mine Action Centre (UNMAC) in Croatia, and in 1998 this centre was integrated into Cromac. In the period from 1995 to 1998 many steps had been taken in order for the Croatian government to establish their mine action centre. First of all they established a humanitarian mine action program, then they implemented a demining plan and at the same time the first demining company, AKD Mungos, was established. Croatia ratified the Mine Ban Treaty in 1997, and it came into force 2 years later. In 1998 Cromac was established, in order to combine every demining activity in one institution, and during 2004 Cromac became operational without any foreign organizations advisors’ assistance (Cromac 2004).
Before Cromac was founded demining was performed by the Croatian military, police, and civil protection units (Informant MV). The role of Cromac is to coordinate mine action in the country, including mine victims assistance and mine risk education, fencing and marking, to supervise the processes involved and to handle the funding coming in both from the state and international donors. In addition to this, Cromac gathers information about the situation in the different regions and counties, and reports this to the government. On the basis of some of this information Cromac and the government set up the prioritization list of what areas will get funding for clearance, they allocate these resources to the counties, and put the clearance projects out as tenders. The companies who bid on these tenders have to deliver a clearance plan containing the name of the deminers, with certificates proving their abilities as deminers, the tools they plan to use, and how they will perform the clearance activities. Cromac also performs monitoring and quality assurance of tasks being cleared, they check the areas before they are given back to the owners, and they give out certificates saying that the cleared areas are safe for use. In that way they monitor every demining activity in Croatia (Informant MV).

The Croatian Government each year take out about 80-85% of their income and put it into mine action, “which is bloody fantastic” (Informant PC) and Croatia is one of the few governments in the world which takes the mine problem seriously. The last 20% comes from different donors, for example Norway, Germany and France. In order to have the 80-85% to give to mine action, it is important that the infrastructure is in place, that people pay taxes, and that they have somewhere to go to work. By paying taxes the people finance the clearance of their country and neighbourhood. In order to give taxes, clearance of infrastructure has had priority over the local and small scale projects from the beginning of the clearance project in Croatia (Informant PC).

Cromac is organized into 5 different levels where the council is on top of the pyramid, followed by the director. Third from the top they have the director’s office, and the department of quality assurance and quality control. The fourth level contains 3 divisions; the operations division, the support division, and the plan, analysis and finance division. On the bottom of the pyramid you find the regional offices in Osijek, Karlovac and Zadar (Cromac 2004).

Many of the employees in Cromac are former military personnel. They have strict rules how to do their job, how to clear mines, and as to who is allowed into the country to assist them in this matter.
The NPA

NPA is, as earlier mentioned, the only NGO accredited by Cromac to do mine action in Croatia, and the only organization outside Cromac accredited to perform technical and general survey (ICBL 2004). The other demining companies are commercial, and organizations in Croatia, like the Croatian Red Cross, have nothing to do with the demining part. The Croatian Red Cross has mine risk education as its main responsibility in cooperation with the international Red Cross (Informant MV). When the NPA came to Croatia they seem to have had problems in the beginning with the cooperation with the government and Cromac (Informant PC). The former communist regime has in a way put out hinders for the NPA in that the people and the state are used to not asking questions. They see what they have, and they try to make the best out of it. Therefore it must have been difficult for the NPA to get validation for their NGO perspective which entails giving information to the public about the processes initiated, looking for projects that will benefit most people instead of state property and so on, towards Cromac and the state. They had a hard time being accepted. People in general were sceptical to them as an international aid organization, and the fact that they had their own way of doing mine clearance was not accepted by the state (Informant PC). But the earlier communist regime has also made the national mine action centre a well-functioning control mechanism. Every demining team has to be approved by Cromac, and as earlier mentioned, all plans connected to demining must be approved by Cromac, and must be according to the Croatian law. According to the NPAs program manager the Croatian government had to go to the parliament and “change the law so we could get accepted” (Informant PC). The fact that Cromac is in control makes it hard to be an NGO working according to their own principles as the regime and the already established commercial demining community have no relationship with the humanitarian objective and their way of assessing the areas needing to be cleared. In the beginning this led to NPA being given tasks that was not related to their objective, and in that way felt like a waste of time. This way “it is almost like a mis-match [...] between [...] the system they [the government] have” (informant BG) and the system the NPA have. But in spite of this it seems to work. They have formed a cooperation, and “its actually quite easy to work together” (Informant BG).

Even though the NPA “brought in a new process to a country that has a system that is very [...] questionable to change, especially from the international side” (Informant PC), by now the NPA has managed to get permission to work in its own way most of the time. They are able to choose between the tasks Cromac offers them, and decide which one of them best
fit their objective, and they have the opportunity to choose an area and stay in that area and finish it, instead of moving on to different areas when there are still mines in the nearby area of the initial project. The commercial companies have no way of doing this as they get paid for each project they do (Informant PC). They do not have the money to stay in one area and work outside of the initial task. The NPA can take on smaller projects in remote areas that have a social benefit, but that may not give any economic profit to the state (ICBL 2004).

The NPA depends on the funding they get from the Norwegian government and from different donors. Having this relationship where you depend upon getting financial assistance in order to perform your job, entails having to compromise. Donors often have specific criteria as to why they shall donate money. One instance with the NPA concerned a mine clearing machine. This specific machine is expensive to use, it is often in need of repairs, and the maintenance is also expensive. There are other machines that are much more cost-effective, but in order to receive funding, the NPA had to take the expensive machine because the donors had a deal with the producer of the machine (Informant PC). As Kjellman et al (2003) states; donors often complicate well-meant efforts through their sudden decreases, or increases, in funding, “or by pressuring for agendas that may not be suited to the needs of aid recipients” (Kjellman et al. 2003:856). Having to take on and use a machine that will, in the long run, slow down the process of work because of its unreliability, is indeed not suited to the needs of the recipients. But because of the competition between different organizations in different countries and regions, every NGO has to establish a position within the world of funding as being worthy of the funds given to them. They cannot afford to turn down an offer because it might ruin their reputation and make it harder for them to receive funds later on. Both governments and organizations can increase the competition between the NGOs and other commercial companies (Kjellman et al. 2003).

Community liaison

The NPA as an NGO tries to involve the local population as much as possible in who they are, what they are doing, and why they are doing it. In the beginning it was difficult for the NPA to be accepted in Croatia both as deminers and as a humanitarian organization. Because of the war and the way the role of the UN was perceived by some segments of the population, many Croats were sceptical towards getting help from the outside. They had their own way of demining and coping with the post-war problems, and they did not want anyone coming to their country telling them what to do. Therefore it was very important in the beginning to let people know what the intentions of the NPA were (Informant PC). After being accepted by
the National Mine Action Centre, the NPA had to go out to the local community and find a way of making them cooperate. They contacted local head-men, churches, and mayors, and held town-meetings. One of these town-meetings took place in a church where the NPA was present with a translator who translated the information, and the questions the civilians had. At the end of the session the priest had said to those who showed up “and remember, these people drive around in white vehicles that have got green crosses on, they are good people, they are not the UN” (Informant PC). Getting the rumour started that they were there to help the best way they could, was very important in order to get people to trust them.

Since then the NPA has tried to have a well functioning communication with all levels of the community and in that way ensure everybody proper information, both the community, and the NPA deminers. They depend on the information the communities can give them in order to work according to their main objective, which is to facilitate and support local communities, and to have as many beneficiaries to each project as possible.

It is not an easy thing to get hold of an entire community and give them the information felt needed. Where should you have the meeting, are you going to gather all members of the community to that one place, will you have more than one meeting, or should you rely on the natural information spread in the community? To be able to reach all levels, you must have a person with good people skills who is respected, and who is able to communicate with all age groups and both sexes. In many countries a woman would not be accepted into the male domain and the same with a man into the female domain. If the person is accepted, many places it is less likely that a female will get the same respect as a male interviewer. It is therefore preferable to have one of each gender doing the liaison together (Informant PC). In Croatia the NPA has a female Task Impact Assessment-officer (TIA-officer) whose job it is to talk to the local community in order to get the information needed to perform the TIA. In addition to her, there are older male deminers who take care of the older male part of the communities, because in some places she would not get the necessary respect in order to give the right information and be trusted. Having the right person doing the job is not only important in relation to the information flow to and from the community, but also in order to make the right assessment and stick with it. Many people would have problems identifying only a few projects and not get carried away and list all the projects that need to be dealt with, and as she told me “the only thing that is difficult is to not be able to help all the people enough” (Informant LM). She has to go around in the communities and talk to people about their financial and social problems, how the mines affect them, and how they are doing
in general. This she does several times in the same community as will be discussed later in the chapter.

While in Croatia I experienced the community contact with the NPA in two different regions, Knin and Slavonia, and what I saw surprised me. In a community there is often a few people who know more about where the mines are and what kind of mines there are, than others. These people communicate with the mayor because of the prioritization list the mayors of each county has to give Cromac and the county offices each year, and they are people who have the opportunity to guide demining teams around the local community. When the NPA comes to a new area, they will first contact the mayor, the priest, or someone else who has a character that is well known in the community and that stands out (Informant PC, In.c.). This person will then take the NPA to the person who has most knowledge of the mines in the area, and they will establish a two-way communication between them. In Zadar and in Markusica I talked to farmers with different levels of contact with the NPA. In Zadar I realized that I interviewed farmers who were the NPAs contact persons in the communities, while in Markusica the contact person guided me around and took me to other farmers I could interview. In Zadar they all knew about the NPA, who they were, what they were doing, where they were doing it and why they were doing it. While in Slavonia, no one except the contact person knew about the NPA. Some thought that the NPA donated money to other companies who would clear the areas, while others thought they gave money to people who needed to have their windows fixed after the war, while others again had never heard of them. The reason might be connected to the fact that the NPA can only do clearance in Slavonia during the summer, and that they had not got the funding they were waiting for and therefore would not be able to do the planned project in Slavonia in 2004, and therefore had not had any contact with the Slavonian communities since 2003. But it may also be failed community liaison. When the NPA starts up a project in a new area, it is natural that they want to talk to the ones who know about the mines, and who can give them the needed information, but they also have to talk to the rest of the community in order to be able to give them mine risk education, and to make them understand the process that is going on. In Croatia the clearance teams usually leave behind their tape and markers used while clearing, which makes it hard for the civilians to know if they have taken a few days off or if they have finished demining. It is most likely the suspended tasks that are the most dangerous (Informant BG). The farmers have seen the demining teams working in the area, they have seen them leave, they see all the plastic tape still in the trees and on the ground, and they do not know if the area is cleared and safe for use. If the community liaison does not work, there might be serious accidents waiting
to happen in the case of the suspended tasks. Giving this information is an important part of the mine risk education and the liaison (Informant PC).

Even though the villagers can contribute to the priority setting in which areas to clear, they may not always feel that the mine clearance teams really see the need they have in getting the land cleared as soon as possible. They do the best they can in contributing with information, showing where the fields are and where the mines are, but sometimes the information they give does not seem to give them the results they wanted from the deminers (Skåra 2003). Giving the local community the information needed is, as mentioned, a difficult task to do. One way of getting the information out, is by inviting the locals to participate in group interviews where they all come together in groups and discuss the problems, and give the information back to the deminers. It has been argued that this way of doing it is not the best because it will exclude the poorest groups in the community. The ones with the biggest fields will have more to lose by not showing up, and therefore this group will be overrepresented in such a setting, and the poorest ones might be neglected (Skåra 2003). Still, the fact that the villagers participate in the liaison with the deminers means that they take the problem seriously and that they feel the need for doing something about it.

Village demining

Not getting the expected help can lead to village demining. Village demining is a phenomenon especially experienced in Cambodia. In Cambodia, as in other mine affected countries, the population develop “mine smartness” and learns how to act around mines and how to get on with their life until the demining companies will clear the land. Mine smartness refers to the “adapted attitude and behaviour informed by subjective norms, agency and knowledge of specific local risks, as well as general know-how” (Andersson et al. 2003:874). Different regions have different patterns in the mine fields and a different extent of the problem, and this calls for different strategies for survival. In some regions the inhabitants have the opportunity to earn an income through a job, such as in the Zadar region in Croatia, whereas in other regions the population seem more dependent on subsistence farming, herding animals, and collecting firewood. The northwest of Cambodia is so contaminated by mines, and there are so many people who depend on an income from the land, that some of the inhabitants have become what is known as village deminers. These deminers are often former soldiers with training in how to handle mines, both when it comes to deploying and removing them. They not only take the mines that are on top of the soil, they also find the mines that lay buried in the ground. Varying with the type of mine, the village deminer either removes the
explosives, or puts the mines in a safe place until a demining team travelling by can pick them up (Bottomley 2003b).

The reason they take this risk both for themselves, their family and their local neighbourhood, is because they do not see any other solution. They are poor, they are hungry, they want to provide for their family, and the only way they can do that, is by clearing the fields for mines so they can live from the harvest. Because of the risk, they do not clear the whole area; they just clear the piece of land they need in order to get by. The same thing happened in Croatia right after the war. A few of my informants told me they had cleared pieces of their land in order to start using it because they thought the professional clearance teams did not get there fast enough (Informant KM, ZD). One of the informants had also cleared land for some of his neighbours. But calling the Croatian farmers village deminers would be wrong. Ruth Bottomley (2003b) claims that a village deminer is a person who carry out a more technical and comprehensive type of mine clearance, instead of “just” removing the mines on top of the ground. It involves prodding for mines and dismantling them once they have been removed from the soil (Bottomley 2003b). The farmers in Croatia have ways of testing the field to see if it is contaminated. A herd of sheep grazing a field can be a reliable way of finding out if there are mines, but this method is expensive and therefore not used often. This mostly helps people develop their mine-smartness as to where not to let the sheep out. Another way of testing the field is by setting fire to it (Bottomley 2003b). Often a mine will detonate when reached by the flames, but it is not 100% safe to use the land after having used this method, because it is uncertain if all the mines in the ground have detonated. One of my informants once set fire to his family’s field, and 2 mines exploded by the heat, but the family still do not use the land because of the risk it entails (Informant KZ).

Village demining is both positive and negative in the eyes of the professional demining teams. It saves a lot of time in that there is less land to clear, but it makes it difficult for the demining teams to trust the results of the surveys. They have a task to do, and when they arrive at the project area they may use their resources on an area that has already been cleared, thereby taking the time from other tasks that are in more of a hurry (Informant PC). It helps if the deminers see the area being used, either by people or by cattle, but if there are no traces of it being in use, they have no way of knowing if the area is cleared or not. The aspect of village demining is only one reason why it is so important to have a well functioning community liaison and why there is a constant need for surveys. Both these can prevent a demining team from spending unnecessary amounts of time on a project. It is also questionable when it comes to safety both for the villagers and the demining teams. Village
demining is a visible proof of the need for demining in a community. There have been discussions as to how involved the local community should be in the demining process. If they are too involved they might get a feeling of ownership to the project, and if it by one reason or another should fall through, the community will be disappointed and it can cause anger and frustration towards the demining teams (Skåra 2003). This can to some extent be seen in Croatia where the donors did not give the promised funding in time, and the project fell through. This was especially hard on one of the families I interviewed as they were hoping to get their land cleared as soon as possible because they depended on it as income, and because of the location of the land the possibility of accidents by car increases when the autumn and winter is on its way (Informant KZ).

Having a community liaison approach requires that it is being maintained and “kept warm”. It is not enough to communicate with the local population in the beginning of the project, but there has to be an ongoing communication about everything that happens, and why it happens in that way. If the communication is not being kept up, the villagers may feel that they have little or no control over the timing of the assistance promised, which can lead to frustration and village demining (Skåra 2003). In Croatia I more than once met farmers who had taken their own initiative and cleared areas themselves in order to be able to grow their land. They did this mainly because they did not see they had time to wait for the professional deminers to come to their area. Of the farmers not having their land cleared the feeling of frustration was evident. They had no information as to why their land was not cleared, when it would be cleared, and even if it would be cleared at all (Informant KZ). Not knowing these things when you depend on the land for income and the subsistence the land will give you is a source of desperation. The fear of living in a mine contaminated area also hinders the possibility of living a normal life with freedom of movement. In order to give the right assistance needed in different communities, demining agencies and organizations has to create a tailor-made demining programme for each community and in order to do this, the demining agencies and organizations must base their assistance on the local knowledge and priorities (Skåra 2003). This is one of the main characteristics separating the NPA and the commercial companies working with demining in Croatia. The NPA as an NGO takes the local capacities and knowledge into consideration when assessing the impact landmines have on the projected community. By doing this they increase their chance of helping the community in the best possible way.
Empowerment

Empowerment is the local population’s opportunity to participate in a process that will give benefits either through psychological, social or political worth (Friedmann 1992). The term “empowerment” is one characteristic in the history of development, and it implies including individuals in the development process through consciousness raising, education and an understanding of the local community’s ability and resources (Potter et al. 1999). It is a process that wants to include “the poorest of the poor” (Potter et al. 1999:177), and it is more than purely participation in that it gives the local communities the opportunity to initiate their own development. Dale (2000) says that empowerment “means a process whereby people acquire more influence over factors that shape their lives”, and that it is normally applied to disadvantaged groups in society, and the goal is an equalisation of living conditions between people in the society. Friedmann (1992) uses the household as the basis of empowerment as the household is the smallest and most basic unit in a community, and because he sees it to be the households, and not the individuals, who are poor. In this respect empowerment is discussed in accordance with household’s access to social power. In a household there are three forms of power; social, political and psychological. When a community is disempowered the households lack one or more of these kinds of power, and in order to empower them again, they must regain the lost power. Social power denotes access to certain areas in life where they can gather and produce information, knowledge and skills, and where they can participate in social organizations of various kinds. Political power refers to being a member in the decision-making process in the community and society. It is to have the right to have an opinion, to vote and to be a part of political associations of different types. The psychological power is the power vested in being self-confident. The members in a household who have psychological power have the will to create opportunities and change in their current situation (Friedmann 1992).

Gains in the social power must be translated into effective political power, so that the interests of households and localities can be effectively advocated, defended, and acknowledged at the macrosphere of regional, national and even international politics (Friedmann 1992:34).

Satisfying these three needs of power in a household and community is what alternative development such as empowerment seeks. It is a bottom-up approach that takes its point of origin in the local community and tries to develop a sense of belonging and ability in it, and
thereby has a positive development without control from the government and focus on national economy and profit (Friedmann 1992).

The prioritization process in Croatia, with the yearly national plan, gives the locals the opportunity to participate in a political process that will give them social and economic gains, and at the same time improve their psychological well-being. Each year they cooperate with their local mayor, who then cooperates with the state and Cromac, and then the state finally makes the list of which areas need to be cleared next year (Informants MV, IC, NM, VS, MrM, MS, LM). Having the opportunity to be a part of this process gives the farmers and other locals a feeling of actually doing something with their situation, and being empowered gives them more confidence and therefore also a wish of making the best out of their situation (Friedmann 1992). The empowerment model is according to Friedmann (1992) both descriptive and prospective. It is descriptive in that poverty is seen from the perspective of the poor who try to make ends meet mainly in the household, and it is prospective in that those who are relatively disempowered will want to have more power and therefore are engaged in a “lifelong struggle to improve their situation with respect to one or more bases of social power” (Friedmann 1992:71). The poorest families and individuals will still have problems even when facing the different bases of power, and will need help from national or international organizations, unions or the state. These external aid agents are very important in being able to make developmental progress, but empowerment can never be imposed from the outside. The agents will always stand on the outside in order to give support that will encourage the disempowered from within (Friedmann 1992).

National and international NGO’s have played an important role in the process of facilitating empowerment and helping the poor participate in the development process (Potter et al. 1999). One dominant NGO perspective is that development is the responsibility of the poor themselves, and that the NGO’s function as catalysts of the development as they can give advice and prepare the community for the changes that have to be made, and see the resources and opportunities that are in the communities. By making the poor realize what the problem is, and how they can mend it, they can start organizing the self-organization. The poor will take the opportunity given to them, and through this improve the society both when it comes to material living standards, and the psychological-social dimension (Degnbol-Martinussen and Engberg-Pedersen 2003). The NPA functions as a catalyst to empowerment in the local communities in that their TIA approach to mine action gives each family the opportunity to have their areas cleared, and hence have future social and political power. Giving the families this opportunity also increases their bases of psychological power in that
they themselves have basic and vital information the demining teams need in order to perform their work. They experience being needed, and that their knowledge is valuable to somebody who stands outside of their community and outside of their problems. The local population is the most important part for the NPA to be able to perform TIA. Through the NPA’s mine action and TIA, they are included in every aspect of demining in their community.

Because of the different abilities of governments and NGO’s when it comes to development and community relations, one could say that cooperation between government institutions and NGO’s would be the best alternative. NPA have tried, and to a certain extent managed, to create cooperation with the Croatian Government and Cromac, in that they are a part of Cromac’s prioritization system, and being that, they have the opportunity to choose between high-impact tasks. The NPA’s wish of having TIA implemented at a national level has not yet come true.

Implementing it nationally might also help reduce the amount of village demining as it is a consequence of actions taken by inhabitants in affected communities who do not see their needs being sufficiently met by the national mine action authorities. This communal initiative is not made by ignorant actors who are tired of waiting for demining to begin, but very often by former military personnel who are well aware of the risk they take in performing this work. They are also careful not to clear more areas than is needed in the village, and they clear new paths in the woods every day in order to be as safe as possible (Goslin 2003). In Cambodia the villagers empower themselves by performing village demining, and in that way gain respect and help the rest of the community having an income and feeling safe in their neighbourhood. There was some village demining in Croatia at the end of the war as many farmers needed to have their land cleared and the national mine clearance operations were still in their early beginning (Informant ZD, KM, PC, MS). A positive aspect about it is that the villagers get the opportunity to use their farmland and the surrounding areas. Some of my informants told me that they started clearing their land by themselves as they needed the small profit the land would give them, and because they thought the professional demining was too slow (KM, ZD). Having the will and knowledge to do this job helps the local community as long as the areas become completely safe.

As earlier mentioned, the demining the NPA conducts in Croatia, consists of more than just the basic demining, and therefore they term it Humanitarian Mine Action (HMA). One of the parts in HMA is Mine Risk Education (MRE). In Croatia the main focus of attention when it comes to mine risk education is on children up to 15 years of age. Every school has the topic
of mines on their curriculum, and they get visits from different actors twice a year. One character they use in order to get the children’s attention in the education is Bembo. Bembo is a famous character from the children’s tv-show, and all the children adore him and look up to him. So when he comes to their school and tells the children not to play with mines, not to touch them, and to call the police if they find one, the children listen (Informant VT). This mine related education in school stops when the children reach 15 years of age. At that time they have had many hours of training in how to act around mines, and are supposed to know well what they look like, and how to behave around them. But the fact is that accidents happen to people between 15 and 50 years of age. There are very few children under 15 involved in mine related accidents in Croatia (Informant VT, PC).

NPA has a MRE program that is more adjusted to suit the older population and the population in the area they work. It is MRE in the “operational sense” (Informant PC).

We go to a community before we start de-mining, we go around all the villages and the people living in that area, and we say: next week we are going to start demining here, and we will put up some sticks and pickets up there, don’t take them. Because they are going to mark the area, and there is the sign. We want to show them what we are going to do, we will have vehicles, we will park them there, if you have a problem with anything that happens, please contact us. And that sort of stuff. (Informant PC).

That means the community is being told where the mines are, what NPA plans to do with them, when they arrive in the area, where they will start working and where they will park their cars. They also talk to the locals about what the different signs mean, and tell them not to steal the different markers. Stealing of markers has been a problem in different areas as the farmers use the pickets to support their tomato plants (Informant PC, observed). By giving this information the local population increases their knowledge about their situation, and having this information makes it easier for them to avoid dangerous situations. In that way the local population can take more control over their own life.

Surveying and Prioritizing
To prioritize means to identify which areas are important to clear, mark, or give mine risk education (Bottomley 2003b). In order to get this information the Landmine Impact Survey (LIS) has been developed and might be one of the most significant developments in recent years as it measures the impact mines have on communities by looking at the number of victims and general blockage indicators (Goslin 2003). It will provide information about mine contamination and the socio-economic impact that follows. To get information about impact and contamination, the persons gathering information need to stay in the different areas for a
few days time and establish relations with the local population in order to get their trust, and get a better understanding of what it means to live in an area contaminated by mines (Bottomley 2003b). Because of the many different communities LIS has to fit, it has a general nature in order to be able to gather information quickly and have a quantitative processing. Therefore it is not possible to get a thorough profile of each community, and the LIS does not give enough data on the specific areas that need to be surveyed technically within the communities (Goslin 2003).

The Landmine Impact Survey is a national survey being conducted through international standards, and the objective of the LIS is to

..provide the three major partners of mine action – national authorities, donors, and implementing agencies – with a common database. This database is constructed to give national authorities the ability to manipulate the data in a transparent way that is responsive to national priorities. International donors will have data that conforms to an international standard that will put individual countries in a global perspective. And implementing agencies will have detailed information for tasking resources and measuring progress across all areas of mine action (Eaton 2003:915).

The LIS will provide all sectors of mine action with nationwide data that will facilitate planning and integration and in that way give important national information as to the social and economic impact the mines have on the different communities. It is an important tool that will help define the different areas into high-, medium-, and low impact areas. Through this it is easier to assess which areas need to be cleared first. Performing LIS is time consuming in that it involves all affected communities in a country, and it is only a few countries part of the MBT that has performed this survey. The countries that have finished the survey is Yemen, Chad, Mozambique and Thailand, while another 8 countries are in the process of conducting it (Eaton 2003). Performing LIS takes time as it involves all mine affected communities in the given country. To perform it, a team of surveyors will spend a few days in each village in which they will perform group interviews and registration of mine fields (Harpviken et al. 2003). As earlier mentioned the effectiveness of group interviews in a situation where they are trying to assess the impact level of different areas may be problematic as group interviews can exclude certain groups in society (Skåra 2003). It is the most effective means of reaching as many as possible, and in speeding up the interview process, but not all people have the same ability to speak up in a group situation. The ones with the most resources are often the ones that have the ability to make them selves heard, while the ones that need help the most might
disappear in such a context. They are the ones that have the least resources from the beginning, and might not be able to negotiate the needs they feel they have.

The best way to get the most reliable data about the impact in the communities is to talk to the local population. They are the ones who know the most about the impact mines have. The impact data collected is being grouped into 2 categories, the economic blockage and the victims (Eaton 2003). After the categorization of data, the areas will be given scores as to how high the impact is, and then be put into one of the three impact levels (high, medium, low). The prioritization of which areas to clear is then left to the national authorities. The data used in the LIS are being collected at the level called Suspected Hazard Area (SHA) and is later being aggregated up to the community level. After this the national priorities are established, and the mine action authorities take their activities down again to the SHA level. The SHA level equals the village level (Eaton 2003).

The LIS is a big help in reducing the amount of high-impact areas in a country, and it is also a big help when it comes to the prioritization process. After having a LIS performed, one can see that the levels of impact are often not as bad as it originally seemed. Fewer than 10% of all communities turn out to be high impact, 25% are medium impact, and more than 65% are low impact communities (Eaton 2003). This means that only 10% of the communities are in need of immediate help as the mines in the areas are both blocking the economic gain in the communities, and the level of mine related accidents is relatively high. The 65% of low impact communities can have their quality of life improved by fencing and marking the mine affected areas, as they do not represent an immediate risk to the population, but there may still be accidents. Even though these numbers are uplifting there is a need to be cautious about the information gathered in the LIS as much of it may be out of date by the time it reaches the national plan, because information gathered in the LIS may take 2 to 3 years to process and reach the demining operators (Goslin 2003). The LIS requires a special information-management system in order to process the information, and this again requires trained personnel. Because of this, one should show caution when relying on that kind of information when setting priorities, and the data need to be kept as alive and fresh as possible. If being used in demining task selection it also needs to be more detailed in order for the demining operators to be able to choose the tasks they wish to take on (ibid).

Therefore a community-oriented approach has been suggested. The community-oriented approach will look more closely into each community, and because of this it will be time consuming. It is thus more appropriate to take on for demining agencies staying for a
longer period of time in one area, than for a national survey team. Commercial companies will not perform community studies when taking on tasks because of their way of getting paid and therefore this approach will not be viable in a country dominated by commercial clearance (Goslin 2003).

Cromac priorities

When it comes to choosing which areas to clear, the Croatian government has a routine that is meant to attend to the needs of every level in society, and in many ways it does. Each year the government makes a list of each counties prioritized areas to clear. In order to compose this list, the mayor of each village and county communicates with the local population and gathers information about the needs and wants in their district. When this has been done, the list is sent to the county. The county then makes their county mine action plan with their priorities in the list, and then the list is sent to Cromac. Cromac, in cooperation with the government, puts in the national priorities (Informant BG). Then they see which priorities each county and municipality has. When they give out the money to each municipality they give in accordance with the wishes of each community as far as they can. The national priorities will have a higher rank than both the counties’ and the smaller communities’, but the list is a means of getting an idea as to where the problem is, and it will help the local communities in getting the areas they need cleared first.

It is a “bottom-up system that is being filtered from the top” (Informant BG). When giving funds to the counties, who then again will govern the funds given to each project, the government does not have enough money to clear all the areas the regions consider necessary. There are always some projects that will not get on the list. Some of these projects are being given to different donors, and others will have to wait until next year before they get on the list. That is, if they are just as important next year (Informant MV).

Some projects can be taken on by NPA if they see the need for getting the area cleared, even though it is not on the national plan. It is not an easy thing to do because the projects has to be signed by different persons in Cromac, and NPA will have to present an accepted reason for wanting to do this project (Informant PC). When NPA wants to work on a project that is not on the list, it means it is less likely that Cromac will have the yearly plan finished during the year. Some projects are too big to be taken on during one year, and it will then be transferred to the list for next year.

The projects usually being prioritized by the municipalities are houses, areas around the houses, then fields and farmland, schools and hospitals and other official buildings, roads
and infrastructural areas. They prioritize like this in order to get the inhabitants back to the municipality and the different villages, and to be able to rebuild the society. No one wants to come back if they can not live in their own house and work on their land (Informant MrM, MS).

The national priorities are most often infrastructural areas. These areas will give financial progress in more than one way, and the economy is important in the rebuilding of a country. Without having the economic base the government will not be able to help the municipalities and local villages in the same way as they can now. This can be seen in Bosnia where the government after the war had a weak economic base and a weak government (Informant PC). BHMAC has improved tremendously the last 2-3 years, but they lack the economic support from their government. They are donor dependent, and therefore consequently not self-sufficient. The government of BiH have not taken the necessary steps to take full responsibility for solving the mine and UXO problem in BiH (Informant EJ). The mine problem in Croatia was just as high as it was in Bosnia, but because of the strength in the Croatian government and the stronger economic base, Croatia is now on its way out of the top ten list of most mine affected countries in the world. The government is dedicated to the job, and the surveillance they have with the different clearing projects and the demining teams working on them, and the control they have with their people working within the mine action authority, hinders corruption (Informant PC, BG).

This system, with the list of priorities, requires survey of the affected areas and the governments’ knowledge about the mine contamination in its country in order to be able to make the right assessments as to how much funds the different areas are to be given.

**NPA priorities: Task Impact Assessment**

Task impact assessment is the analysis of the likelihood that mine clearance of a prioritised site will impact positively, directly or (and most likely) indirectly through facilitating for other humanitarian initiatives, on the socio-economy of the targeted community.

When NPA sets its priorities of which areas they wish to clear, they use Task Impact Assessment (TIA) in order to get more detailed information than the LIS can provide when setting their priorities. The TIA is a simple tool developed in the end of 2001 by Sara Sekkenes. The idea to develop this tool came from the need to give their donors a proper evaluation of the work they had sponsored. NPA did not believe their sponsors would be

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satisfied with some of the projects NPA had cleared on account of their money (Informant PC). So the TIA was developed and became an important tool for them to be able to choose the tasks they want to take on by gathering information about the socio-economic impact on communities, and to stand for the choices they make. It helps give a more informed decision about the tasks to take on and it gives the organization a well founded reason for clearing or not clearing areas according to their main organizational objective (Informant PC). After having experienced clearing areas in the mountains of Kosovo where no people were living, and later on clearing grenades and mines outside a school full of kids, the need to be able to choose tasks was strong (Informant PC).

Belinda Goslin says that the limited resources in mine clearance calls for a means of improving efficiency and effectiveness in mine action operations (Goslin 2003). She differs between efficiency and effectiveness in saying that “improving efficiency involves streamlining and developing technical activities so that as much mine action as possible can be carried out with available funds” and that “improving effectiveness means adopting appropriate measures to avoid poor prioritisation, ensuring that resources are utilised effectively and objectives are met” (Goslin 2003:924).

When it comes to priorities it is often the various stakeholders that set the premises on all levels from the global to the community level. According to Goslin there are 4 levels of prioritization. The first level is the global level where the allocations of donors’ resources take place. Donors may allocate resources on the basis of their own countries objectives and policies, or they will be influenced by the national priorities in the beneficial country and allocate in line with the national mine action plans. The second level of priorities is the national level within the mine affected countries. National Mine Action Authorities (NMAA) have the responsibility to develop strategic objectives for the mine problem, and for prioritizing specific areas in which to work (Goslin 2003). The third level is at the implementation level, often by the mine action operators themselves. This is the level where the TIA has been used so far. Here the operators have to work both according to their own organizational objective, and at the same time within the rules and regulations of the national mine action authorities. TIA is a tool that helps NPA to work both according to the national and local priorities and according to the organizational objective. The fourth and last level is within the mine affected community. Local residents in mine affected communities are the main stakeholders when it comes to mine action. They take risks every day living with the threat, but they are still the ones with the least influence on the process of setting priorities because the regional, national and global priorities will always come first (Goslin 2003).
Forgetting the local priorities can cause the villagers to deal with the problem themselves and start village demining like they did in Cambodia. The feeling of not being heard can cause so much frustration that people see a need for weighing the pros and cons in life, and prefer to take the risk of losing a limb prior to not being able to feed ones family (Bottomley 2003b). Performing community liaison is an important part of the TIA in that it relies on the pressing needs of the local community.

After the initial idea of the TIA was developed, NPA did a retrospective TIA of the projects they had done in Kosovo, and saw that some of them were “really a waste of time” (Informant PC). Trying to avoid that in Croatia, they tried to implement it right from the beginning.

In the beginning the TIA was a questionnaire with lots of questions the TIA-officer would ask the local population at each possible project, and it became evident that the amount of information it required was too big. It would take too long to process the information in the questionnaire, and it was too time consuming in comparison to the other tasks of the organization. They tried to give it the time it needed and they tried to implement it at the national level, but it was conflicting with how Cromac operated, so they did not “quite get it right” in the beginning (Informant PC). The amount of information they required would, according to PC, take about 4 months to process, and by the time they would have finished going through the information the clearance teams would already have started the project. So they changed it to be a more effective and simple tool, and now, if you do not understand it, it can seem too simple. The questions are basic, and it takes a much shorter time to go through (see Appendix V and VI). The TIA looks for 5 types of information that will affect which category the community is in, and also the prioritization of tasks. The 5 types of information are: 1) the type of beneficiaries, 2) the context in which the beneficiaries find themselves, 3) the type of post-demining activities planned for the area, 4) those responsible for carrying out the post-demining activities planned for the area, and 5) the likelihood of changes to the plan (Goslin 2003:931). It is important to know these things because the humanitarian demining agency needs to know if the task is going to be cost-effective. Clearing an area takes great resources both when it comes to human resources and economically, and if the area is not going to be used because the beneficiaries have no ready plans for use, for instance they have no seeds or tools, then it may be better to find an area where these things are already in place. If the area is of such a nature that it will employ many people if cleared and it represents a great risk to the local community, finding organizations or companies that have the opportunity to give the help required is an option for getting the area cleared (Goslin 2003).
The reduction in the size of the TIA has made the implementation of it more effective. By now you can perform a TIA of a project, and have the finished assessment ready within 2 weeks time. Because of this it is possible to perform it during the survey of an area, and in that way NPA does not lose any time in performing the assessment (Informant PC). One point of the TIA was to have a way of comparing different tasks in order to find the right one to take on. This does not mean that they wanted to compare hundreds of tasks, because they do not have the time or money to perform such extensive work. The amount of tasks they compare are no more than 10. The abundance of information required and the amount of work required to be able to compare more than 10 tasks would be too much to handle, and that is one reason why it might be very difficult to implement on the national level (Informant BG). They have, as mentioned, tried to implement it in the commercial system, but the different attitude towards clearing, compared to the humanitarian, makes it difficult to follow through.

The TIA has proven to be a proper tool when it comes to assessing the projects NPA take on. According to their organizational objective, NPA tries to clear areas that will benefit most people (Informant VS). It does not have to be a huge area as long as there are many people using it. It does not even have to be a high priority area. An example of this is a task NPA did in Pristek where they found lots of anti-tank mines with tilt rods. The area was not being used as farmland, but as a grazing field for sheep and other animals. The need to clear the land was evident in that the mines were equipped with tilt-rods, and the sheep and shepherd could easily get injured or killed (Informant PC). Being a high priority area does not mean that there have to be many people directly affected by the mines, but that they can be indirectly affected. By this I mean that a big field may feed 5 out of 10 families living nearby, but 8 may be directly affected, and 2 indirectly. They are indirectly affected in that they live nearby; they live with the threat in their neighbourhood. 3 of the 8 families may use the field as a way of getting to their own field that may not be contaminated and is in that way directly affected (Informant VS, PC).

A part of the TIA that always has to be factored in is operational capability on behalf of the mine clearance teams (Informant BG, DJ). When preparing which task to take on, they always have to see how many deminers they have available at the given time, how many dogs, and how many machines, and then they have to choose a task that will keep as many resources occupied as possible so that no resources are being wasted (Informant DJ). If you have a mine cat machine inoperable, it would be preferred that it be used in the next project, and the same goes for dogs and manual clearers. The dogs have to be trained regularly not to lose their abilities, and therefore should not be out of work for a longer period of time.
The operational capability comes in addition to the wish of having as many beneficiaries as possible, and the wish to perform the tasks as soon as possible.

A definition of Impact Assessment is

a systematic analysis of lasting or significant changes – positive and negative, intended or not – in people’s lives brought about by a given action or a series of actions (Chris Roche in Goslin 2003:927).

This means that it is not enough to look at the actions performed in dealing with the problem, like MRE or the amount of land cleared. The impact on the beneficiaries has to be measured in how the action has caused change in their lives (Goslin 2003). The TIA is developed in order for NPA to “ensure that its demining activities actually achieve their objectives and correspond to the needs of identified target groups and beneficiaries” (Goslin 2003:930). The TIA-officer therefore has the responsibility of collecting all the data needed in the TIA before, during, right after, and a while after the project has been taken on, and finished. He, or she, has to assess the actual impact the action has had. The information gathered in the TIA before the task was taken on is being checked towards the actual results in the field after the clearing. Is the land being used, has the clearing benefited the population, have the living conditions improved and so on. If it turns out that the land is not being used, the TIA-officer has to assess why this is so.

In Bosnia and Herzegovina the TIA has been implemented as Task Assessment and Planning (TAP). It is the same tool and the same principle; it is only the name that is different (Informant PC, BG). All SHA’s that are assessed in the TAP are placed into one out of 5 categories ranging from “immediate action” in category 1 to “monitor” in category 5. The TAP is mostly concerned with category 2 and 3 where 2 is “immediate action” and 3 is “wait for more inputs or changed risk assessment” (Eaton 2003). The difference between the two categories is that in category 2 the mines represent a potential risk to the inhabitants, and there is a high chance of the area being used after the clearance because of the available resources in the village. In category 3 the mines represent the same risk as in 2, but it is not necessarily certain that the area will be used after clearance because the village and its inhabitants have a certain lack of resources. An area in category 2 will be cleared for mines, whereas an area in category 3 is unsure. For that area to move into category 2 and be cleared, it has to have some external assistance in order to get the resources needed to make use of the land. The resources they need can be several different things, like an irrigation system or seeds. If a demining agency is to take on a category 3 area, they have to find support to the village either from the
government, an international agency or an NGO, that is willing to give fertilizer, seeds, tractors and so on.

NPA have their TIA to make these assessments as to if an area will be used after clearance. NPA have cleared areas where the farmers have a lack of one or more resources. They check with the government and its rules for support to farmers, and see if the farmers in question fall into that group of people with the plans they have for the land. If they do not fall into that group, NPA have their own office of reconstruction from which they try to help those who need it the most. During the war in Croatia there was a massive destruction of private property and many refugees and internally displaced persons (IDP’s). In order to rebuild their country and to have people coming back to Croatia the government gives full support to those who lost their homes during the war. If they have papers proving the house in question was in their possession before and during the war, the government will rebuild it totally, and even give some basic furniture (Informant ZR). The NPA office of reconstruction mainly looks for returnees when they help people get back to their old life. They most of all want to reach young parents who are resourceful people with the will and ability to create a good environment in the villages, and to start a new life and manage to get by on their own. They also want to reach the ones that are sincere when it comes to how long they want to stay in Croatia and what they want to achieve. NPA also reconstruct houses the same way the government does, but in addition to the reconstruction part they have an income-generating component. This means that they also help farmers get hold of tractor, seeds, and other necessary tools and equipment for them to get a sustainable livelihood (Informant ZR). Not all farmers who ask NPA for help will get it, as there are strict regulations to why they should get it. These strict rules and regulations allow NPA to really get to know their beneficiaries, and also to trust that they will earn the help they have been given. They can not afford to rebuild a house that is not going to be used by the owners, or that is going to be sold after a short period of time, and they do not want to have the same situation in Croatia they had in Bosnia and Herzegovina where the houses were left empty (Informant ZR).

The NPA reconstruction office differs from Zadar County’s office of reconstruction and mine clearance in that the county office works more with rebuilding infrastructure. They also cooperate with the local population but more at the mayor-level. They communicate with the mayors, they hang up maps of the contaminated areas in the community they are visiting, and in this way they both receive and give information about where the contamination is (Informant NM). They perform community liaison in more or less the same way as NPA.
when they want to get information. But still one of the most powerful tools when it comes to defining the impact landmines have on the nearby communities is the use of surveys such as the LIS and the TIA (Eaton 2003).

The TIA does not stand on its own and the areas assessed in it are not randomly picked while driving in the countryside. The TIA is performed after the general assessment on the national level and the areas are in most cases part of the national mine action plan. They take the areas that have been categorized as high impact, and areas that are suspected to be mine contaminated when finding the tasks they assess. Because of this it responds to the local priorities in a way that can be difficult for the government, because of all the other priorities, local, regional, and national, the government has to respond to. The process of the TIA is being conducted no matter where the projected task comes from, if it is the national mine action centre, local authorities, from an NGO, or from information gathered during NPA’s own survey activities on suspected areas (Goslin 2003).

**TIA/TAP**

Having the TIA improves the work of the demining organization, and it also gives donors well-founded reasons for why their money has been spent the way they have (Informant PC). In addition to this it gives NPA a reputation for being consistent in their organizational objective and for caring about the local population. They are there because they want to help people get back on their feet and live their life, they are not there to make money and build highways and factories, or to clear desolate mountain ranges instead of schoolyards and football fields.

As earlier mentioned, one of the main factors in the TIA that has to be present for the TIA to be functional is community liaison. Without cooperation and contact with the local communities, the TIA is useless. It relies on information the deminers and the TIA-officer can get from the inhabitants of the impacted communities, and with no, or little, contact with them, the value of the TIA disappears. Still one has to be aware that the TIA and NPA can not help every family that needs it. Of the tasks they are given from Cromac, they can only choose one or two to take on at the same time. Here one can see the use of the TIA, as it will help NPA make the right decisions as to which tasks they should take on first (In.c.).

Humanitarian Mine Action (HMA) is a relatively new sector within aid, but during the decade it has existed, HMA has focused on assessments of the social and economic impact mines have on the affected communities. This focus has led to huge improvements in the quality of
mine clearance, and also to the integration of mine action in post-war reconstruction and
development (Goslin 2003).

The essence of the shift in HMA lies in a reorientation from defining the mine problem in
terms of numbers of mines or total area of land suspected of being contaminated by
mines to defining it in terms of the impact of mines on human populations
(Goslin 2003:890).

Having a national HMA operation is expensive and a long-term commitment to the country
in question. Because of this it is important to make sure the right areas are being cleared as
soon as possible, and that the resources available are being relocated and used in the best
possible way (Goslin 2003). In order to do that, one has to communicate with the locals.

When it comes to the decisive factors of if or not they are going to clear an area, the
economy and threat to life and limb are important. Of those two factors it is the threat to life
and limb that weighs most (Eaton 2003). The Task Assessment and Planning (TAP) project in
Bosnia and Herzegovina (BiH), a modified version of the TIA, showed that not all areas that
have been assessed as high-impact communities in the LIS needs to be cleared immediately
(Eaton 2003). The TAP in BiH showed that only 20% of the communities the TAP survey
team visited was recommended for clearance, 30% for marking, while 50% was of no obvious
threat to the community (SurveyActionCenter and HandicapInternational 2004). All of these
communities visited by the survey team were Suspected Hazardous Areas (SHA) in the LIS.
The report also shows that out of the total SHAs in BiH, only 14% requires clearing. This is a
huge reduction from the LIS which has all the high- and medium- impact SHAs included in
its conclusion of areas needing to be cleared. When using TAP statistics on the national level
the report states less than 200km² needs to be cleared, in stead of 1400km². The LIS seems to
be an accurate survey in finding SHAs, but the TAP/TIA is a “valuable second check”
(SurveyActionCenter and HandicapInternational 2004:61) of the community level data, and
according to the report the TAP survey confirmed the accuracy of the LIS. Still it shows that
the demining resources could have been better spent and organized if the TAP/TIA had been
implemented from the start, maybe as a part of the LIS. In reducing the affected areas in BiH
with almost 1200km² the country is most likely to reach its goal of becoming impact free, and
maybe even mine free, by 2009. Another example is from a project NPA did in Angola in
1997 in which they cleared a sizeable field thought suited for crops. Later research, after
finding the area desolate after clearance, showed that the soil in this particular area was not
suited for cultivation (Goslin 2003). If the TIA had been implemented in the national survey
programme a “failure” such as this could be avoided, and a reduction like the one experienced
in BiH could happen in Croatia. Many officials seem to believe that Croatia will be mine free by 2009, while others working with demining can not see this happen. By using the TIA the same way as TAP was used in BiH, Croatia could experience the same reduction in high- and medium-impact areas. The LIS is too big to find the little differences between communities NPA is looking for through the TIA. The TIA and the TAP are important tools in finding these areas and getting them cleared. The only question is: are the cleared areas being used after clearance?

**Measuring impact**

Task Impact Assessment is about measuring the impact a project will have on the local population in the affected area. Chris Roche has defined impact assessment to be

> a systematic analysis of lasting or significant changes- positive and negative, intended or not- in peoples lives brought about by a given action or a series of actions (Goslin 2003:927)

This means that you cannot measure impact only in the interventions made, like demining, marking, fencing, and so on, but that you have to measure how this demining, marking and fencing is changing the local populations lives (Goslin 2003). According to Goslin, it is more important to measure the impact of an action than to measure the output of an action, and that the impact is what both NMAA’s and other mine action operators need to focus on. This goes back to the earlier mentioned difference between effectiveness and efficiency. Efficiency means improving the technical activities so that as much mine action as possible can be undertaken with the available resources, while effectiveness means “adopting appropriate measures to avoid poor prioritisation” (Goslin 2003:924). Effectiveness is the point in matter that has the ability to change people’s lives through better prioritization. By making the right priorities a larger part of the population will have the opportunity to get back their normal way of life as soon as possible.

An important part of TIA is post-demining assessment to see if the areas that have been cleared through the TIA have had a positive effect on the local population. At this point the true meaning of Roche’s definition of impact assessment comes forward. Without assessing the impact after clearance, the demining agencies will have no way of knowing if it indeed was a successful project (Goslin 2003). There can be many reasons for not using the cleared land, as my interviews have shown also, varying from waiting for the right weather, to lack of resources, to fear of safety. The post-demining assessment will help the demining
agencies improve both their effectiveness and their efficiency in that they will be able to see which areas are being used, why they are, or why they are not being used, and see the value in community liaison, empowerment, and the local’s knowledge.

Summary
Mine Action Centres was established in order to empower the affected countries, and give them the opportunity to organize their own mine clearance activities with national staff. This has had different success in different countries, with Croatia as one of the success stories. Cromac has the overall control of the demining, and they have strict rules the demining teams have to follow in order to do their job. Even though they had some problems in the beginning, the mine clearance process has now included the local population in the entire process. They participate in making the national list of priorities. NPA also empower the local population through their Task Impact Assessment. They go directly to the affected communities, they communicate with the locals, and in this way the locals participate in their own development in a way that does not put them in risk, such as village demining.

TIA has proven its worth in Bosnia Herzegovina through TAP, which is its equivalent. By implementing TIA at an early stage of demining, at a national level, it could help reduce the areas characterized as high impact, and thereby give the affected country, or state, a better chance of being risk-free by the time limit set by the Mine Ban Treaty.
During my fieldwork in Croatia I stayed in two different places; Zadar, and Markusica in Slavonia. In these areas I went around to several small villages, but I will use the name Zadar as a common denominator, as I also will use Slavonia as one. These two places have many differences, but also many likenesses. First of all there is a big difference in the size of the fields each farmer owns. In the Zadar area the farmers use square metres (m²) when talking about the size of their land, whereas in Slavonia they use hectares (ha). A normal field in Zadar may be 10,000 m², while in Slavonia it may be 5 ha. The average size of land in the Knin region is not big enough for the farmers to get a profit that pays off, so most of the farming is for the farmers own usage, so called subsistence farming. “They have all got tiny little patches of it, and that’s not their main income. It’s all supplemented” (Informant PC). Most of the farmers in the south have an additional income, but sees the expected income from the fields as necessary for them to live a good life (Informant PS, PC, TS, KM), even though it make take years for the fields to pay off (Informant TS). “Most of these people have [...] other jobs” (Informant MS) which makes it possible for them to get by in a transition period until the crops will give them a profit. In the north it is a bit different. In Slavonia the farmers seem to be more full-time farmers. “In Slavonia it’s more like it is in England” (Informant BG). The fields are, as mentioned, bigger, and they grow wheat and corn instead of olives and grapes for wine. Still it seems many farmers both in Zadar and Slavonia needs an extra income next to the farming, and the government has tried to sort this out by selling some of the former government land to private farmers who have had the opportunity to buy and grow this land, and later hire people to work for them (Informant KM, LM). Other families, who does not have the resources to buy government land, have got the opportunity to work on it for free, and get the profit for themselves. “They give state fields, [...] government property, they give them to work so they can live” (Informant MrM). This seems to have been the case in Slavonia where the farmers told me they were working on “government land” (Informant ZD, ME).

Another difference between these two places is climate. In Zadar it is warm, and there are mild winters, while in Slavonia the summers are shorter, and the winters are snowy and cold. As earlier mentioned this difference makes it more difficult to plan mine action in Croatia as the demining agencies have to move all their equipment and machinery north to Slavonia when the summer comes in order to clear areas. Because of that the deminers will
have to be finished with the tasks they are working on in Zadar by the time the clearance can commence in Slavonia. In 2004 the NPA had difficulties going to Slavonia as they were lacking some donor money, and because of that Cromac did not fulfil the yearly clearance plan in that area. The demining teams have to be in Slavonia early when the frost goes out of the ground because of the short summers and limited time they have to clear in the area. It is not possible to clear if it rains, and with a less stable climate than in Zadar, the actual number of possible working days are limited (In.c., Informant PC). In Zadar they can clear almost year round, but the NPA prefer going to Slavonia in the summer because of the tourist season and the heat in Zadar (In.c.). In order to get to all the high impact areas in a country you can not focus on one area. The TIA gives the NPA good knowledge as to where the high impact areas are, but the NPA are unfortunately the only agency in Croatia using TIA and therefore many high impact areas are left uncleared even though there are commercial companies clearing in Slavonia. When I was in Slavonia I interviewed farmers who were desperate to find out when their land would be cleared, both because they did not want to live with the threat any longer, and because of the location of their land. One of the families owned land lying in a curve by the main road, and they were terrified that an accident would happen and a car would slide off into the mine contaminated land (Informant KZ). This family’s land was also used by other farmers as a short cut to the fishing river. The farmers had themselves cleared a path they could use, but the rest of the land was still contaminated. In order to see if there were many mines in the field, the family set fire to it. Some mines exploded because of the heat, but they are still too afraid to use the land as they do not know if all the mines exploded. Another family I interviewed had got their land cleared some time ago, but they were afraid to use it because they had not got any proof from the demining teams or the state that the land was safe (Informant ME). They could see other farmers using land that had been cleared by the same agency (the NPA), but they did not trust their own to be safe. The wife in this family felt they had been let out of the demining process as they did not get any information about what was going on, and that getting this information was a right of this family. Why they had not got this information is difficult to know. It may be because this family was not a contact family for the NPA, or that they had missed out on town meetings where this sort of information would be given according to the programme manager in the NPA in Benkovac.

This feeling of not being part of the process was a third difference between Zadar and Slavonia. The farmers I interviewed in Zadar all had high thoughts about the NPA and their work, and they were grateful that it was the NPA that had cleared their land. While in
Slavonia most of them were unsure of who and what the NPA was. Some of the farmers thought the NPA were either donating money, windows, and so on, while others thought they were hiring other demining companies to do the clearance. In Zadar the farmers all knew that it was the NPA that had cleared their land (Informants KM, TS, MS, PS), while in Slavonia this had to be discussed with my contact person (Informants ZD, SB, SK, ME). One of the reasons for this was discussed in the chapter concerning method. The informants in Zadar were all handpicked by the TIA-officer as they were farmers she knew how to get in touch with, and she knew they were all in different stages of reusing their land. These farmers were all the NPA’s contact persons during the TIA procedure, before, during and after the clearance of their land. In Slavonia the person the NPA put me in contact with was their only contact person in that area. He then again put me in contact with farmers that the NPA had no knowledge about, other than that they had cleared their land during a task. The farmers in Slavonia had therefore no first hand knowledge of the NPA. Another reason for this difference may be the short amount of time the NPA has in Slavonia. The summers in the area are short, and leave only a little time to demine, and winters are long when it is hard to clear during autumn and spring. Having town meetings is probably too time consuming if it is to be performed each time the NPA is in the area. Also the problem of donor money meant that the NPA had not been in the area since the year before (2003), and it is easy to forget who cleared your land when there so many different demining agencies as in Croatia. In 2004 there were 33 active demining agencies in Croatia (Informant IC) (Cromac 2004). Demining is a lengthy process that takes time, and when people get desperate and want to return to their normal life with subsistence farming, they start to demine themselves. Two of my informants in Croatia had cleared their own land for mines before the demining teams arrived. They started clearing for themselves because they needed to satisfy their basic needs, but they did not clear all of it. One of them cleared only the area he needed to survive, while the other cleared 2.5 ha. At that time the demining agencies arrived in his village, and took over the clearance. This second one also cleared the land of one of his neighbours (Informants KM, ZD). Both of them have later on gotten help from the NPA’s reconstruction programme.

Yet another difference between these areas is the crops. In Zadar the farmers planned to plant peach trees and strawberries (Informant KM), olive trees (Informant TS), potatoes (Informant PS) or grapes for wine (Informant MS). In Slavonia they planned corn (Informant SB, RM, ZD), or grass for their cattle (ME), except for the one family where the children had moved out, the husband was about to get retired and getting his pension, and they only wanted a small patch to grow tomatoes, paprika, and other vegetables for their own use (Informant
SK). The difference in crops between these two areas is of course due to soil, climate, and other conditions. But it seemed the farmers in Zadar had an easier time getting started and getting some profit from their crops, than the farmers in Slavonia. In Zadar farmers get support from the state if they grow certain crops, like olive trees, if the farm is of a certain size (Informant TS, LM). The bank will finance 25% of the amount of money the farmer has on his own, to invest in the land. In addition to this, the farmer get a loan. The farmer does not have to pay back the 25% the bank is willing to invest. In order to get the loan though, the farmer must have some form of guarantee, like a house or machinery, the bank can use as security. Some crops get more support than others, and olive trees is a crop that is being financed by the state. First the state will give the farmer the trees to plant, and when the olives are being picked, the farmer can get 50 kuna per olive tree planted in one ha (Hrvatski Sabor27). This is probably why so many farmers where changing their crops in order to grow olive trees. One of my informants in Zadar had corn crops before the war, but had plans to change to olives now because of the support. His field was also located favourable for a crop of olives, which made it easier for him to decide to change the crop (Informant TS). In Slavonia the farmers told me that they have to get credit in the “farmer’s cooperative” to get the seeds they need to get started, but in return the cooperative demand a certain percentage of the crop (Informant SB). The state will give the farmers support for next years crop if they manage to grow more than, for example, 46 tons of wheat pr ha, which is difficult with fields the sizes they are in Slavonia. A farmer may get 60 tons pr ha if it is a good year, but this will not give the farmer any profit as he will have to pay the “farmer’s cooperative” a certain percentage from the crop to pay his credit (Informant SB).

A likeness between the two areas is that none of the farmers expected any profit from their crops (Informant TS, PS, SB, ZD, SK, KZ, ME), except one. This farmer got his land cleared as one of the first tasks in Zadar, after having cleared half of it himself, and he had also bought additional land to increase the size of his field. He had already hired people to work for him, and he planned to hire more as his strawberries were soon to be picked. He also had a field of apples and wanted to invest in a small factory so he could produce apple juice, but he was short of finances as he had already spent all his money on his existing crop. The rest of the farmers would look at my translator, laugh a little, or looked surprised that I could ask what they expected as profit from the crops. It was understood that it would take a long time before they would notice any difference in income. “If it’s a good year, then like maybe

27 Copy of legal papers received in Croatia and translated to me by translator.
60 tons on hectare of wheat, if it’s a good year [...] and when you sell all that, you can make like maybe €1000, and when you pay everything, you don’t get nothing” (Informant SB). It seems strange that they would go through all this work and not get any particular profit from it, but as an informant said “their way of life is gardening or having chickens” (Informant PC). Not being able to grow some fruits or vegetables, and not being able to grow the field that will give them the little extra they need in order to get by, seems to be a matter of living the “good” or “bad” life. As the mayor in Markusica told me, before the fields were cleared “they [were] living from nothing” (Informant MrM). But even though they do not expect any immediate change in income, they feel a need to start using their land as soon as possible. Before the clearance it was frustrating for them not to be able to grow their crops. “You have a land and you can’t work on it. You have and you don’t have. You stand and you look at it and you can work nothing on it, you have got to leave” (Informant SB). Mine clearance takes time, and the waiting period can be long when you want to start using your land. “They can’t get to their fields, they can’t earn money, they can’t do nothing” (Informant MrM). This is a problem when they do not live like the rest of Western Europe, they do not just “go to the supermarket and buy everything they need. They live by the season” (Informant PC, BG), which is why it is so important to get the fields cleared for mines and back into production as soon as possible. This was another likeness between the areas and the farmers; they all wanted desperately to start reusing their land.

One of the main reasons [why they are not farming] would be the fact that people don’t have the money to start reusing the land (Informant VS)

The thing hindering them in reusing the land seems most often to be economy. They need assistance in one way or other, either through the “farmer’s cooperative” or through state support. In some cases the farmers do not qualify to get state support, which means they will have to get help from somewhere else. As earlier mentioned, the NPA’s reconstruction programme tries to help the ones that do not qualify for state support. They try to find people who are serious in their wishes to get back on their feet, and people who can be a source of inspiration for other villagers. The NPA need to trust their beneficiaries 100% as they do not want to risk equipment being sold instead of being used (Informant ZR). Some of the farmers I interviewed had received help from the NPA’s reconstruction programme as they had been given a plough or a tractor.

After the war the state has helped many people by rebuilding their houses at their pre-war locations. If a family have papers proving a property being theirs before and during the
war, the state will rebuild it, and also donate some basic furniture. The state does not consider whether or not the family still wants to live on that location. Because of this many houses are left empty, and other houses remain in rubbles. The state has no opportunity to tear down the bombed homes as long they do not get approval from the family owning the property. As many refugees do not wish to move back to Croatia, there are still evidences of war outside the centre of bigger towns. One of the families I interviewed had got their house rebuilt in Vukovar, since that was where they lived before and during the war. They had moved to Markusica because they had nothing to live from in Vukovar. They had no jobs, and their field was in Markusica, so their house was left empty in Vukovar. The wife thought this to be an absurd situation; they had two houses, but no money (Informant ME). Another family had also got their house rebuilt by the government, and they were living in it, but the house was too small. In order to have a bedroom for each person in the family, you have to have a birth certificate for each and every one. The wife in this family was pregnant at the time their house was being rebuilt, and since they did not have a birth certificate for their unborn child, they could not get a separate bedroom for the baby (Informant TS, LM).

When a field has been laying fallow for 13 years it needs a lot of preparations before it is possible to get a good crop (Informant MV), and in order to do this work the farmers need basic equipment, such as a tractor, plough, seeds, and so on. The NPA’s reconstruction programme help farmers get this equipment if the farmers show commitment and will to use the equipment donated. “With this we think we help them have some income from their own work” (Informant ZR). This is a traditional development aid mentality that sees the need in giving the local population a sense of being useful, and they become able to do a fair day’s work. If a farmer intends to hire people to work on the land, it is a positive effect which makes it more likely he will be a part of the NPA’s reconstruction programme (Informant ZR, LM).

As earlier mentioned, when an area is being cleared, the deminers use plastic markers to mark off where they have cleared so there will be no accidents among deminers when returning to the task on a new day. When given MRE and proper information about the demining process, it has happened that villagers living in the area have entered the area during the weekends or holidays and started reusing the land. This was also the case in Skabrnja. As soon as a farmer saw that his land was cleared, he would enter it and start preparing it, even though his neighbour’s field would not yet be cleared (Informant MS). In Skabrnja there are about 2000 people, and my informant told me that all the inhabitants in the village were affected by mines. Still there are 100,000 m² of contaminated land surrounding the village.
(2004), but not all of this is high impact and will not be cleared immediately. “They just do the parts were the land is going to be used. You can never clear everything” (Informant MS).

There are still accidents in this village as the villagers push the limits of where it is safe to walk. There are many injured people in Skabrnja as many came back to the area before the demining had started and many wanted to clear their properties themselves in order to get back to their normal way of life. Before the war all the inhabitants in the village were farmers, and therefore everyone was affected by the mine contamination. It was hard for this village, as it was for all other contaminated villages, to get back to a normal state, but the inhabitants managed to get by because of pensions and because of relatives living abroad sends money (Informant MS).

Skabrnja is not the only village where the demining agencies have not cleared the entire contaminated area. This is normal in demining. It is important to clear the areas that are high impact as soon as possible, and in order to reduce as many of them as possible, it is important to deal with the most serious tasks first, where there are some form of guarantees that the areas will be put to use by the local population. The TIA is, as earlier mentioned a proper tool when it comes to deciding which areas should be prioritized first. As an informant said “mostly the priorities are set ok, and when the area is demined there is immediately somebody there [to] start use this area” (Informant MV). If the cleared area is owned by the state or by a company, they will prepare the area for buildings and businesses, if it is privately owned, the farmers will prepare the land for growing crops (Informant MV). Not all the farmers have the opportunity to start using the land immediately after it has been declared safe for use for more than one reason. The obvious reason is lack of funding and resources. They have the will and the need, but the cost is too high without any assistance from the state or different humanitarian organizations. Another reason may be that the area was not cleared as farmland. It may have been cleared because it was too big a threat to the community without being an area needed to satisfy basic necessities. It may have been a park or a playground. It will be put to use in due time, but it will not be financially profitable for the local community. It will be a social benefit. The NPA’s objective involves improving the living conditions of their beneficiaries both socially and economically. Clearing a house for mines, and the surrounding areas might get people to move back to the area, but if they are not going to be able to use the fields and pastures they used before the war, there might be no reason for them to stay. They need to have a little patch of land in their garden or their field in which they can plant olive trees, tomatoes and peach trees. “They want to be able to sustain a normal life.
That means having a vegetable patch, growing tomatoes and whatever they want to grow” (Informant PC).

**What does this mean?**

So what does all this mean? It means that the farmers are poor, they are in some cases desperate to get their land cleared, and they need resources to be able to start reusing their land after clearance. They need to feel safe in their neighbourhood, and they need to know that something is going to be done about the situation. Humanitarian Mine Action is important because it tries to embrace all these issues. It wants to reach out to the ones that not necessarily will be prioritized in the yearly national plan, it wants to give the people security about the process that is going on in the community. They teach the local population how to act around mines and clearance projects, and who to contact if they find mines. And they want to help them get hold of the equipment they need in order to work the land after it has been cleared.

Through TIA the NPA gives the local population a safe approach to dealing with the mine problem both through continuing communication and through follow-up of the different tasks they take on (Appendix V and VI). By searching for the areas most affected, and areas that are most likely to be put to use, the NPA speeds up the process of reducing high-impact areas. Farmers and other villagers are part of the process through community liaison and MRE. Through this they become empowered. They are given the chance to do something about their situation, and their willingness to participate decides whether or not the area will be cleared. The village as a whole will experience economic growth, security and safety, and a return to normal life. Trusting the demining teams is essential in trusting the results of the demining. When the clearing is being cut short, as in Slavonia, it is hard to keep the trust and communication with a community. The expectations can not be met sufficiently and this can cause resentment and a feeling of the situation as out of control among the villagers. Most of the times this happens outside the control of the NPA, as they can not control the weather conditions, and they depend on donor money to come through. A problem with donor money was the reason why the NPA could not begin clearance in Slavonia inn 2004 at the time they wanted. The TIA also gives the NPA the opportunity to find the areas that are most likely to be put to use after clearance. It narrows down all the areas classified as high impact and finds the ones that are in most need of clearance. As shown in Bosnia Herzegovina, the TAP reduced the high impact areas considerably, thereby giving the national mine action centre the possibility of being closer to being risk-free within the time limit.
In areas where community liaison is working, and the clearance commences without hindrance, one can clearly see the benefits of organizing mine clearance in the spirit of the NPA. The farmers regain their confidence, they feel secure in their neighbourhood, and they start reusing their land. By being able to use their pastures and fields it will be easier for the farmers to get by. They will also have a small economic surplus after a few years of production, and the country will slowly experience less poverty and unemployment.

According to the NPA the commercial companies have no contact with the communities in which they perform clearance. When they have cleared their task they move on to another task in a completely different area. They do not finish an area if it is not part of their task. As earlier mentioned, the NPA has on occasions found mines right outside of a finished commercial task. As long as the commercial companies are not paid to complete the entire area, they will move on and the mines will continue right outside the fence, maybe even in the neighbour’s field. When the NPA clear an area they want to complete it and make it safe for all the users. This is of course only if they have enough time in the area to complete it. In Slavonia they have not had the time to clear entire areas because of the limited amount of time they have there. In those cases they take as much as they can of many fields in order to return land to as many farmers as possible so they can start reusing it. And they will reuse the land. They just have to figure out a way to combat the obstacles they meet on their way. These are, as earlier mentioned, most often economical. If they do not have the opportunity to use the land for growing crops the first year after clearance, the TIA suggests that the farmers get support from NGO’s or farming cooperatives, and in the meantime, while waiting for the support, to use the field in another way than initially planned (Appendix V and VI). Using the field in another way gives the farmers more time to plan and prepare the next year’s field, and it will profit either the owner of the field, or maybe a neighbour who has not gotten his pastures cleared. Anyway it will be put to use in the best possible way as soon as possible. The NPA tries to do all they can in order to get the land back into production, but if the farmers do not have the will to reuse the land, there is nothing more the NPA can do. The farmers I interviewed in Croatia all had the will and need to start reusing their land, and this proves the effectiveness of the TIA as the NPA’s prioritization tool.

Summary

In this chapter I have shown how the farmers in Croatia feel about their land and the demining process in their country. Some of them are happy about their situation as they have managed
to get their land into production through various aid programmes, while others feel frustrated about their situation as they have no knowledge of what is going on, when their land will be cleared, or whether it is safe to use the land after clearance. The objective of the NPA is to clear land that will benefit people both socially and economically and clearing pastures and fields is important in that respect as it seems to be the only thing missing for the locals to get back to their normal way of life. Without having a gardening patch, they seem to be dissatisfied, and the little money they can save by growing crops, tomatoes, peach trees and so on, seems to be a matter of living a good or bad life. The farmers I interviewed were all eager to start using their land, which proves the effectiveness of the TIA and of clearing land in the spirit of the NPA.
Chap. 7: Conclusion and Perspective

In this thesis I have shown what the demining process includes and how it is performed, using the Norwegian People’s Aid as an example. I wanted to see how they prioritize which areas to clear, how the mines and the clearance affect the local population, and whether the cleared areas are being used.

In Croatia the NPA works with Cromac in almost the same way as the commercial companies do. Cromac offers the NPA different tasks, but not as tenders since the NPA is self-funded and therefore do not have to bid on the tasks to get paid. The NPA as a humanitarian organization wants to improve people’s living conditions both socially and economically. In order to improve these conditions they try to involve the local population in the demining process. This they do through community liaison. They mark and fence areas, give Mine Risk Education, and clear mines, but if the community liaison part does not work, it is hard to get access to important information, and to find the areas that are most likely to be put to use after the clearance has finished. Community liaison is an important part of the NPA’s prioritization of which tasks to take on, as the Task Impact Assessment is based on communication. The questions in the TIA have to be answered by a possible future beneficiary for the NPA to know whether the task should be taken on. The area is most likely high-impact as it has been prioritized by Cromac as a task, and been offered to the NPA. The TIA, in the same way as Task Assessment and Planning, gives a “valuable second check” (SurveyActionCenter and HandicapInternational 2004:61) of the community data, and is fitted to find the tasks with most beneficiaries. It reduces the risk of clearing desolate areas, while other areas have hundreds of poor desperate to have their fields or school yards cleared, and who could be beneficiaries. The effectiveness of the TAP/TIA was proven in Bosnia were the use of TAP reduced the amount of high-impact areas considerably.

By including the local population in the process, the NPA creates a sense of safety and control over the situation, and by doing this the villagers become empowered and able to make the necessary changes to get back their normal way of life. The farmers who did not feel part of the process, and who had not got any information about when their land would be cleared did not have this feeling of security. Even though other farmers were using their cleared fields, one of the families I interviewed did not dare to use their field. Because of lacking assurance from the demining team or from Cromac that the area was safe, this family chose not to use it even though they felt they needed the extra income (Informant ME). This
shows that by not being included this family had no way of empowering themselves as they felt incapacitated and restrained by their situation. As earlier mentioned, the farmers were poor and the frustration emanating from the fact that: “you have a land and you can’t work on it. You have and you don’t have. You stand and you look at it and you can work nothing on it, you have got to leave” (Informant SB) was obvious in the ones that had not got their fields cleared yet. The farmers who had started using their land, or was about to apply for state support, seemed much calmer. So by clearing fields and giving information about the process, the NPA gives hope and relief.

There was a difference between the two areas I visited when it comes to the farmers knowledge about the NPA. This, as earlier mentioned, may be because of failed community liaison, or because of unfortunate events that made it impossible for the NPA to be in Slavonia at the time they wanted. The short summers may also be a reason for this, but the point is that without continuing community liaison, the NPA will lose the necessary communication and reassuring effect they can have on a community. This can lead to misunderstandings about the role of the NPA, and discomfort towards demining agencies and the progress they make.

Even though there can be misunderstandings and poor communication it seems the farmers try to start prepare and use their land as soon as possible after the clearance has finished. They are motivated and in need of the little extra they can make on their crops even though they may not make any profit for years. Being able to use the fields seems to have great importance to all people living in Croatia. As an informant told me: “their way of life is gardening or having chickens” (Informant PC). Not being able to grow some fruits or vegetables, and not being able to grow the field that will give the little extra they need in order to get by, seems to be a matter of living the “good” or “bad” life. As long as the NPA manage to find areas where the population depend on using the contaminated fields, the fields will be put to use. The TIA helps the NPA find these areas, and by clearing high-impact areas the country have a higher probability of being risk-free within the time-limit set by the Mine Ban Treaty. And for the TIA to be effective, and to find these areas and the people needing their land cleared, the NPA is dependent upon community liaison.

All this means that the NPA works from a bottom-up perspective where communication with the local population is essential to do a good job, and where clearing areas that may not immediately give the state profit, but is beneficial to the local population, is most important. They include the villagers, make them a part of the process, and give them the opportunity to do something about their situation. They make them feel safe. Being safe is
crucial when it comes to reusing cleared land. If the farmers do not trust the result of the demining, they will not start reusing their field. Therefore; if they trust the demining organization and the demining process, they will reuse the land.

**What can we learn from this?**

What can we learn from Croatia and the NPA? We can learn that it is important to include the local population in the demining process, and it is important to have clear assessments as to which areas to clear. Humanitarian mine clearance takes care of all aspects of the demining process, and by doing this, it gives the local communities better chances to get back to their normal way of life. As shown by the earlier mentioned farmer in Eritrea, communicating with different humanitarian agencies may give a higher probability of getting the treatment that is necessary for the injured to return to a normal way of life. In Kosovo the NPA was clearing mountain ranges instead of contaminated school-yards. In Cambodia the assessments have been so bad that the local population have become more or less professional deminers themselves, trying to take control over their lives and their livelihoods.

By using the TIA the NPA has managed to find areas that are not only high-impact, but which also have many beneficiaries. The local population will notice a difference in how much time it takes to make a country or region risk-free, as the areas they use most, will be cleared first. If this tool was to be implemented at the national level, the demining process would progress much faster, and there could be a reduction in mine related accidents as populated areas would be prioritized. One has to remember, though, this does not mean that only farmland and school-yards will be cleared. As long as a village is inhabited and needs electric power, clearing grounds for power-lines would also be prioritized. But it has to be high-impact and have beneficiaries. Using the TIA when clearing areas in Russia, Africa, and the Middle East would reduce the amount of accidents in these areas, and maybe also help speed up the peaceprocess as it requires communication with all sides in the conflict. The TIA should not stand alone. It focuses on topics too specific for it to be the only tool assessing which areas to clear. It is useful as a supplement to the LIS or other national or regional surveys. Only then will it prove its worth as a proper assessment tool in the demining world.

Humanitarian mine clearance is the best way to perform mine clearance as it encompasses whole communities and all aspects of the inhabitants daily lives, in addition to all aspects of land-mines and what they entail.
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## APPENDIX: I

### List of informants

<table>
<thead>
<tr>
<th>In Norway:</th>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td></td>
<td>Emil Jeremic</td>
<td>(NPA Oslo)</td>
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<td></td>
<td>Per Kvarsvik</td>
<td>(humanitarian worker)</td>
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<td></td>
<td>Rena Military Camp</td>
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<td>Kristian Ruge</td>
<td>(fafo)</td>
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<th>In Croatia:</th>
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<tr>
<td></td>
<td>Paul Collinson</td>
<td>(program manager, NPA)</td>
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<td></td>
<td>Damir Jaksic</td>
<td>(project manager, NPA)</td>
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<td></td>
<td>Lujza Mikulic</td>
<td>(TIA-officer, NPA)</td>
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<td></td>
<td>Vanja Sikirica</td>
<td>(MRE-officer, NPA)</td>
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<td></td>
<td>Zaklina Rados</td>
<td>(NPA reconstruction)</td>
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<td></td>
<td>Slavko</td>
<td>(deminer, NPA)</td>
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<td></td>
<td>Belinda Goslin</td>
<td>(professor, former NPA officer)</td>
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<td></td>
<td>Miljenko Vahtaric</td>
<td>(HCR main office)</td>
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<td></td>
<td>Ivan Cikara</td>
<td>(HCR regional office, Zadar)</td>
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<td></td>
<td>Dubravko Krusarvski</td>
<td>(HCR regional office, Osijek)</td>
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<td></td>
<td>Mladen Skara</td>
<td>(Mayor, Skabrnja)</td>
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<td></td>
<td>Marko Medic</td>
<td>(Mayor, Markusica)</td>
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<td></td>
<td>Nevenka Marinovic</td>
<td>(Zadar County, reconstruction)</td>
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<td></td>
<td>KM</td>
<td>(farmer, Zadar)</td>
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<td></td>
<td>TS</td>
<td>(farmer, Zadar)</td>
</tr>
<tr>
<td></td>
<td>PS</td>
<td>(farmer, Zadar)</td>
</tr>
<tr>
<td></td>
<td>ZD</td>
<td>(farmer, Slavonia)</td>
</tr>
<tr>
<td></td>
<td>SK</td>
<td>(farmer, Slavonia)</td>
</tr>
<tr>
<td></td>
<td>RM</td>
<td>(farmer, Slavonia)</td>
</tr>
<tr>
<td></td>
<td>ME</td>
<td>(farmer, Slavonia)</td>
</tr>
<tr>
<td></td>
<td>KZ</td>
<td>(farmer, Slavonia)</td>
</tr>
<tr>
<td></td>
<td>VT</td>
<td>(teacher, Slavonia)</td>
</tr>
</tbody>
</table>

### Informal conversations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emil Jeremic</td>
<td>(NPA Oslo)</td>
</tr>
<tr>
<td>Jim Rune Nilsen</td>
<td>(former KFOR soldier)</td>
</tr>
<tr>
<td>Slavko</td>
<td>(deminer)</td>
</tr>
<tr>
<td>Silvija Bogdany</td>
<td>(deminer)</td>
</tr>
<tr>
<td>Lujza Mikulic</td>
<td>(TIA-officer)</td>
</tr>
<tr>
<td>Vanja Sikirica</td>
<td>(MRE-officer)</td>
</tr>
<tr>
<td>Stipe Rapan</td>
<td>(translator)</td>
</tr>
<tr>
<td>Kreso</td>
<td>(translator)</td>
</tr>
<tr>
<td>Davor Pavlovic</td>
<td>(landlord)</td>
</tr>
</tbody>
</table>
APPENDIX: II

Interviewguides

*Cromac officials*

1: What is your position at Cromac?
2: When was Cromac established, and how did this come about?
3: How is Cromac organized internally?
4: How much of Croatia is mine contaminated (2004)?
5: Do you believe that Croatia will be free of mines by 2010?
5: What is Cromac’s role in demining?
6: Do Cromac participate in setting up the yearly demining plan?
   - how?
7: Do all projects on the yearly plan get cleared during the year?
   - Why not?
   - What happens with the ones that is not getting cleared?
8: What connection is there between Cromac and the state?
9: What connection is there between Cromac and the demining agencies in Croatia?
10: What connection is there between Cromac and the local mayors?
11: Is the state financing Cromac?
   - do you have any numbers on how much and for how long?
12: How is Cromac administering the mine clearance?
   - In relation to the commercial companies?
   - In relation to NPA?
13: How do Cromac cooperate with NPA, and vice versa?
14: Are there any problems in this partnership?
   - What kind of problems?
   - Why?
15: Are there any differences in the clearing performed by commercial companies and NPA?
   - What differences?
   - Why not?
16: Can I mention your name, or quote you, in the paper?
*Zadar County*

1: What are the tasks of your office?
2: Do your office cooperate with the government and Cromac?
   - How?
3: Do your office cooperate with the demining agencies in Croatia?
   - Which ones, and how?
4: Do the government fund mine clearance?
   - How much?
   - Is it the same amount every year?
   - If not, who is?
5: Do your office participate in the prioritization of areas to clear?
   - How do you make the priorities?
   - Which areas do you prioritize?
   - Why do you prioritize them?

6: Can I mention your name, or quote you, in the paper?

*NPA reconstruction programme*

1: What are the tasks of your office?
2: What kind of reconstruction is NPA offering?
3: Why is NPA offering reconstruction?
4: Who is getting help from your programme?
5: How is this office financed?
   - How much does the programme spend each year?
   - How many can you help each year?
6: What is the difference between the help of NPA’ reconstruction programme, and the county’s reconstruction programme?

7: Can I mention your name, or quote you, in the paper?
**Mayors**

1. How long have you been a mayor?
2. How many inhabitants are there in your district?
3. Is the area mine contaminated?
   - For how long?
   - How big an area?
4. Has there been any demining here?
   - When?
   - How long did it take to perform?
   - How big an area was cleared?
   - Who performed the demining?
5. How many of the inhabitants were, and are still, affected by mines?
6. How do you cooperate with the local population and the government when it comes to making the national list of priorities?
7. How do you choose which areas get on the list?
8. How did, and do, people get by without their fields?
9. Have there been many accidents in this district?
10. Is this a return area?

11. Can I mention your name, or quote you, in the paper?

**Farmers**

1. How big is your land?
2. Did you own this land before the war?
   - What did you grow on your land?
3. When was the land cleared for mines?
   - Is all of the land cleared?
   - If not, do you know when it will be?
4. Do you know who cleared it?
   - What do you think about this demining organization?
   - Did you or your family cooperate or communicate with this organization?
5. For how long were you not able to use your land?
6. Do you have an additional income?
-What do you get it from / what do you work with?
-How many in your household is working / having an additional income?

7: How many live in your household?
8: Do you and your family live off the crops?
9: Are you planning to grow the field this year?
   - What do you plan to grow?
   - Why?
10: What profit do you expect to get from your land?
11: How has the mines affected the life of yourself and your family?
12: Do you have the equipment you need to start using the land?
   - What do you have?
   - If not, what do you need?
   - How will you get this equipment?

13: Can I mention your name, or quote you, in the paper?
APPENDIX III

Map 1: Croatia
By permission: NPA Oslo
Map 2: Mine Contamination in Croatia, 2004

By permission: NPA Oslo
## NORWEGIAN PEOPLE'S AID - MINE ACTION PROGRAMME - CROATIA

### TA PROJECT REPORT

<table>
<thead>
<tr>
<th>Name</th>
<th>Vukvić – Wider Area around a Mine Incident</th>
<th>ID</th>
<th>2004-01</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contact 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Land user</strong></td>
<td>The owner of the land and the owners of the neighbouring land</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Land owner</strong></td>
<td>The family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Standard of living / status of the user</strong></td>
<td>The family is consisted of 9 members, 4 adults and 5 children. Only one person works and makes cosa 400 € a month. They generate a modest, additional income from 9 goats that they own, but barely survive.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Since the mine clearance will create a safe environment, the entire village population, 450 of them, mostly young returnee families, are the indirect beneficiaries.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Damage caused by mine contamination</strong></td>
<td>The owner of the killed goats suffered a direct damage of 2000 € and extra 200 € a month from dairy products. The land owners lose some 3.000 € a year that they could make if they tended their land.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Plans for the future use of land</strong></td>
<td>After the mine clearance the owners intend to plant 1000 vine plants and 200 olive trees.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Start of realization</strong></td>
<td>After mine clearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No. of future beneficiaries</strong></td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Implementor</strong></td>
<td>The land owner</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expected Impact of mine action</strong></td>
<td>Two more persons from the family will be able to work on their land and will provide an additional annual income of 3.000 €. Furthermore, safety in the area will be achieved and the possibility of incidents reduced.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resources needed for the plans</strong></td>
<td>The amount of 3.500 € will be needed for the preparation of the land and purchase of the seedlings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Existing resources</strong></td>
<td>At the moment the family possesses the work-force and know-how in vine and olive-growing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Source of finance</strong></td>
<td>The Ponoći family will apply for a non-returnable financial assistance that the state and local administration give for the revitalization of agriculture in compliance with the Law on State Support to Agriculture, (Official Gazette 87/02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other issues that may affect the plans</strong></td>
<td>None at the moment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Possible obstacles</strong></td>
<td>If the land owners do not qualify for the state financial assistance, they will not be able to engage in the planned agricultural activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Possible solutions</strong></td>
<td>To request donations from NGOs and assistance from farming cooperatives and in the meantime to use the land as pasture.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FIELD VISITS

<table>
<thead>
<tr>
<th>Date</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.3.2004</td>
<td>Discussion with the owners about the current situation and the use of land after mine clearance.</td>
</tr>
<tr>
<td>15.4.2004</td>
<td>Meeting with the mayor of Vukvić, visit to the mine clearance site.</td>
</tr>
<tr>
<td>27.5.2004</td>
<td>Visit to the field after the completed mine clearance.</td>
</tr>
<tr>
<td></td>
<td>Mine clearance completed. The owners are preparing to start using the land.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# APPENDIX VI

NORWEGIAN PEOPLE’S AID - MINE ACTION PROGRAMME - CROATIA

<table>
<thead>
<tr>
<th>Name</th>
<th>Novigrad, Area around the Church St. Martin</th>
<th>ID</th>
<th>2004-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact 1</td>
<td></td>
<td>Contact 2</td>
<td>user</td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>Land user</td>
<td>The residents of Novigrad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land owner</td>
<td>State, families:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard of living / status of the user</td>
<td>The owners’ standard of living is very low. Only five of them are employed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes</td>
<td>The owners have not registered in the Farming Register due to possible mine contamination and could not have requested the State assistance yet. After the clearance they will register and become eligible to the state assistance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damage caused by mine contamination</td>
<td>Before the war the entire area was cultivated. Since return it has not been tended due to possible mine contamination. The accumulated losses are estimated to ca 40,000 $ per an owner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plans for the future use of land</td>
<td>After the mine clearance the users will revitalize agricultural activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start of realization</td>
<td>After the clearance</td>
<td>No. of future beneficiaries</td>
<td>1,400</td>
</tr>
<tr>
<td>Expected impact of mine action</td>
<td>Safe movement in the area of local graveyard and the church and safe use of agricultural land.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources needed for the plans</td>
<td>Every family will need between 1,800 and 2,500 $ for the preparation of land and beginning of farming.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing resources</td>
<td>The users own necessary equipment and man-power.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of finance</td>
<td>In accordance with the Law on the State Support to Agriculture (Official Gazette 87/02), the owners will request the state funds. They and other users will also invest their own funds.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other issues that may affect the plans</td>
<td>None at the moment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible obstacles</td>
<td>Current low standard of living of the users.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible solutions</td>
<td>Assistance from national and international NGOs, farming co-operatives and local administration that support agricultural projects.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FIELD VISITS

<table>
<thead>
<tr>
<th>Status</th>
<th>Reason</th>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st visit</td>
<td>08. 06. 04</td>
<td>Meeting with the Mayor of Novigrad and discussion about the future use of the land.</td>
<td></td>
</tr>
<tr>
<td>Status 1</td>
<td>The area is not used at the moment due to possible mine contamination.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd visit</td>
<td>Reason</td>
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<td>Status 2</td>
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<td>3rd visit</td>
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<td>Status 3</td>
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</tr>
<tr>
<td>4th visit</td>
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<tr>
<td>Status 4</td>
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