Mining in the village of Stara Kamienica, Poland:

Opportunity or Threat for Development?

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1. Introduction

1.1 General Introduction

This research-project is commissioned by 'Nemo: association of wanderers' and is part of the academic master cluster of the Wageningen University in 2006. The aim of the project is to help Nemo in developing alternatives to mining plans of the Polish mining-company Pol-Skal in the municipality of Stara Kamienica in Poland, and to put Nemo's alternative plans for rural development on the agenda in the Polish province Dolnyslasky. We have done this by providing Nemo with an insight in the mining industry, relevant European environmental legislation, and the Polish governmental structure. This information leads to concrete recommendations for Nemo in their future activities.
Although this research has been carried out for a commissioner, we have taken our academic freedom to look at the issue independently and from all sides. In analysing the mining industry, we have not only looked at negative, but also at positive aspects of mining for the development of the region. Our information and recommendations can be used in lobbying for a decision that can benefit all parties.
This amc-group is preceded by other amc-groups that have done research on different topics. However, this research has a different focus then the former ones. Those were aimed at looking for alternatives for rural development in the region. This research considers these alternatives as being present and worked out, and tries to provide insight in the issues that have not been covered before and that can give Nemo additional information to be used in their lobby[1].
The project team consists of five Msc-students International Development with different specializations. Specializations are in rural development sociology, communication and policy making and conflict and governance. Three of the group members are Dutch; the two other group members are from Bangladesh and Tanzania. The team members have experience with working in other cultures, as the Dutch members have all been abroad for some time, and all members have NGO or government working experience.

1.2 Problem Statement

In the South West of Poland, close to the German border, the Polish company Pol-Skal is developing plans to mine for the industrial mineral feldspar in the landscape of the Izery Mountains. Pol-Skal is a relatively new mining company that operates under the rule of the international company Euromarket. Three years ago Pol-Skal bought land in the village of Stara Kamienica, nearby the Nemo[2] compound, and expressed its wish to extract the feldspar it deems present in the area. The Dutch non-governmental organization Nemo has been developing many projects for sustainable tourism and local development in this region during the last 8 years, because it sees the village landscape in the Izery region as unique. Nemo has chosen this location because it is situated on the edge of

[1] See references for an overview of previous reports.
[2] Nemo owns a house and land in Stara Kamienica as a base for holidays in nature.

different nature parks and contains many natural en cultural monuments. Furthermore the region is famous for the castles and summer palaces of the former European royalty[3].
The village Stara Kamienica can be found in the province (voivodship) Dolnośląskie, also called Lower Silesia. According to the website of the Polish Information and Foreign Investment Agency 2.891.140 people live in the Viovodship Dolnośląskie, this is therefore the densest populated region of the country. In 2006 a large majority of them, 71%, was working in the rural sector. Due to demographic changes and migration (- 2,1 per 1000) because of increasing unemployment the population is declining.

Since the end of communism the region faces economic problems. Most of the people living in this area are poor farmers and unemployment rates are high. (increasing from 16,2 % in 1995 to 23.7% in 2001) Unemployment in the age group between 16 and 24 was even 47,3 %. About one third of the incomes, 35%, came from social insurance[i].
During communist times the farmers where supported and subsidized, but after the fall of communism this stopped and the economic situation of most farmers became problematic. Besides the subsidies being stopped the farmers could not cope with EU-legislation and the increased competition for agrarian products on the European market. As a result of the deteriorating social and economic situation in the region there is a strong need for development.
However, different forms of development may be competing. When the mine is going to operate, Nemo thinks that this can mean the end of their activities in the region and the initiatives it promotes for alternative sustainable development.
Although Nemo has developed alternative plans for development, it has problems with getting their plans on the local and regional political agenda. The local and regional government are in need for development opportunities, but the question if mining is good for long-term development of the region is not yet answered. There seems to be some political support against the mining, as the municipality and local organizations protested against the mining plans. However, the provincial government is the responsible authority for giving the permits needed for mining activities.
The mining company Pol-Skal has asked for a permission to carry out research, on which mining operation may follow. The province has made a decision twice, but both times it has been destroyed afterwards by the minister of environment. At this moment the province is about to make a decision for the third time, whether or not Pol-Skal can start research activities in the region.
On the one hand Nemo is trying to convince the government of the ecological, cultural and economic effects of the mining. On the other hand Nemo tries to present alternative development plans to trigger sustainable economic development in the region. Nemo already has a lot of information and ideas about alternative and sustainable regional development, but is missing relevant information to form an effective lobby against the

[3] For a more extensive description of the region, see the thesis of H. Lankveld from International Agricultural College Larenstein, 2004.

mining plans. They do not know much about the mining industry and the economic importance of mining the minerals in Stara Kamienica. Another 'white spot' is the EU-legislation on the environment and regional development that can help stopping the planned mining activities. In addition, information is needed about how the local communities can be motivated to contribute actively in promoting the plans for alternative development and eco-tourism.

1.3 Objectives

The main objective of this research is to help Nemo in its resistance against the mining-plans and to put its plans for rural development on the political agenda in the region. We will do this by providing them with an insight in the mining industry and by giving them an overview of relevant European environmental legislation and rural development funds.

We have identified the following main objectives:

- To analyse the environmental, economic, and socio-cultural impact of the mining industry, particularly in this region
- To analyse relevant European legislation and funding possibilities for rural development
- To provide Nemo with the necessary knowledge and information to organize its lobby for its rural development plans in the region.

The product of this research is a report with the requested information and the recommendations to provide Nemo with necessary information to organize an effective lobby. Of course this has to be done by Nemo itself. Nemo has to identify relevant stakeholders and form coalitions with other organizations and partners to forward its plans that can serve as alternatives for the mining-plans.

1.4 Methodology

This research has been carried out mainly by studying secondary literature. We have used previous reports written for Nemo, news and other information from the Internet (from, for instance, different NGOs, E.U. documents etc.), and scientific journals and articles. Due to financial and time limits it was not possible to carry out our own field research in Poland, but we have used several people within The Netherlands as a source of information. We have consulted T. de Jong, a mining expert from Delft, A. de Roo, an EU environmental expert, and J. Verwijemeren, a former member of the European parliament for Groen Links. We have also talked with students from previous AMC groups and we had frequent contact with our commissioner P. Spruijt from Nemo. We have tried to get more information from the field by contacting the municipality of Stara Kamienica, and the firm Pol-Skal by phone and e-mail. (see appendix 2, D and E) Unfortunately so far there has been no reply, but in case there will be later, we will provide Nemo with this information.

1.5 The structure of this report

The main body of this report starts with chapter two, about a stakeholder analysis. We think this is very important to gain better insight in the situational dynamics of the municipality of Stara Kamienica. Due to a limited time and budget it was not possible to do a full stakeholder analysis, but in this chapter we describe the theoretical framework of a stakeholder analysis, that can give Nemo all the tools to do a more extensive stakeholder analysis themselves.
Chapter three is totally dedicated to mining and the mining industry. First we will give some basics about what actually is open pit mining and the mineral feldspar, that is going to be mined in the region. Then we will give an overview of the economic, environmental, and socio-cultural impact of mining. We have looked at the broader context of the impact of mining worldwide, and where possible we have put forward specific relevant information for the case of feldspar mining in Stara Kamienica. In looking at the impact of mining it is an important discussion until what extent changes are taking place in the mining industry, and if mining can be more sustainable then it used to be. That is why we have included a part about sustainable mining.
In chapter four, a European and Polish framework is given for mining and sustainable development. The chapter gives an overview of EU environmental legislation and funding possibilities for rural development that are relevant for Nemo. To assist Nemo in their political lobbying, we also give an explanation of the political and organisational situation in Poland.
In the conclusion we have put the findings from the whole report together: the importance of a stakeholder analysis, the main environmental, economic, and socio-cultural issues of mining, and information for Nemo in the EU perspective. In the end we give recommendations for Nemo, that hopefully can help them in their future activities.

2 Stakeholder analysis

2.1 Introduction

In this chapter we will describe the concept of a stakeholder analysis. A stakeholder analysis can bring to the fore and identify relevant parties that should, or can, be included in a decision or policy making process. Furthermore it provides insight in the social dynamics around a specific issue, the groups involved, power struggles between those groups and their differing viewpoints, and may provide a starting point for the determination of (lobby) strategies and the pursuit of specific strategic options.
This amc-group thinks that a stakeholder analysis can be used to gain better insight in the situational dynamics of the municipality of Stara Kamienica. It can contribute to a better understanding of the mining-issue in Stara Kamienica and also provide better insight in the strategic opportunities available for the lobby of Nemo. Below the theoretical concepts and the technical aspects of doing a stakeholder analysis are worked out. Unfortunately, due to limited time and budget it was not possible to do a full stakeholder analysis. As said, we think that a stakeholder analysis can be very useful, so we have made a start with it though, and we have tried to create a basis for it. Nemo can use this basis as a start to do a more extensive stakeholder analysis.

2.2 Concepts

In most literature a stakeholder analysis is typically seen as a tool for policy makers to visualize and categorise stakeholders that are relevant for a specific policy (reform), so that policymakers can decide what stakeholders should be included in the policymaking process. However, the stakeholder analysis as a tool is, of course, not exclusively available for policymakers only. A stakeholder analysis can be included in every social analysis, which is done so often in social impact assessments carried out by NGOs. The stakeholder analysis as a tool is used often, but what exactly is a stakeholder analysis?

> *'Stakeholder analysis is the identification of a project's key stakeholders, an assessment of their interests, and the ways in which those interests affect project riskiness and viability. It contributes to project design by identifying the goals and roles of different groups, and by helping to formulate appropriate forms of engagement with these groups.'*[ii]

This definition points out why a stakeholder analysis can contribute to the efforts of Nemo in Poland. The identification of relevant stakeholders and their interests can be used to 'help formulate appropriate forms of engagement with these groups'. In other words: to determine with which groups Nemo can from coalitions for its lobby. Furthermore, a stakeholder analysis also displays in what ways the interest of specific stakeholders (for example: the government, private companies) may influence certain issues.

In the case of Stara Kamienica a stakeholder analysis thus highlights all the actors that are involved or relevant with regard to the mining-plans, but it also brings to the fore those actors that are actually able to influence those plans (or those that are not able to do so at all).
Knowing this, how can we describe a stakeholder then? The Worldbank has developed guidelines for doing a stakeholder analysis. The Worldbank describes a stakeholder in the following way:

> *A stakeholder is any entity with a declared or conceivable interest or stake in a policy concern.(Worldbank[iii])*

This definition is clear. 'Any entity' with a declared or conceivable interest is included and stakeholders are thus actors that have a direct interest in the specific situation, or policy concern. But what specific actors are we talking about? Who exactly are those actors that may have an interest in a specific issue? Are they groups, institutions or persons? According to the Worldbank:

> *'Stakeholders can be of any form, size and capacity. They can be individuals, organizations, or unorganized groups. In most cases, stakeholders fall into one or more of the following categories: international actors (e.g. donors), national or political actors (e.g. legislators, governors) public sector agencies (e.g. MDAs), interest groups (e.g. unions, medical associations), commercial/private for-profit, nonprofit organizations (NGOs, foundations), civil society members, and users/consumers.'*

More specific the relevant stakeholders in natural resource management are typically:

> *'[..] subsistence farmers and other small-scale natural resource users, but stakeholders may equally include development practitioners, policy makers, planners and administrators in government, commercial bodies or non-governmental organizations (NGOs[iv].'*

So, stakeholders can range from political organizations, companies, NGOs etc to local people and farmers. An example of stakeholders and their interests (the example is about forestry) on different levels can be:

Institutional level	Actors	Interests
Global/ International	International agencies Donors Environmental lobbies	Biodiversity conservation climatic regulation
National	National governments NGOs	timber extraction tourism development
Regional	forest departments regional authorities	forest productivity soil conservation
Local off-site	local communities local authorities logging companies	access to timber supply conflict avoidance
Local on-site	forest dwellers livestock keepers agriculturist women firewood collectors	land for cultivation and grazing cultural sites

(source: Grimble and Wellard, 1997)

As said, identifying and mapping stakeholders can be of use for Nemo. It can provide insight for the organization about the social dynamics and power differences between actors concerning the mining-problem, but it can also provide insight in the opportunities for strategic action (lobbying).

2.3 Identifying stakeholders

Having elaborated on the value and the nature of a stakeholder analysis, and knowing from the above what kind of social groups or actors can be a stakeholder, the next logical question is: how to identify relevant stakeholders and how to determine what actor is a stakeholder in what situation? The identification of stakeholders is done in two phases that we describe as the 'preparation phase' and the 'identification phase'. The report of the Worldbank gives a clear indication of what the preparation phase is about.

> '*Prior to the actual collection, a brief review of background literature and country studies can provide a useful understanding of the country's political economy. One method of collecting data is to conduct interviews directly with the stakeholders involved in the specific policy area. The second method is to interview local experts in the field who are knowledgeable about the issue and the important groups and individuals involved in the policy area.*'

This report contains some of the preparatory elements. However, the information that has to be gathered by doing interviews with people and organizations is missing (the reasons why are already mentioned). Nemo already has a lot of knowledge about the local situation and has contacts with local people and organizations, so gathering this information should not pose to be too much of a problem. Nevertheless we want to emphasize that local dynamics can only be identified by doing interviews with the stakeholders themselves and with (local) experts that are acquainted with the situation and the important actors involved.
The most important activities in the identification phase are listing and mapping and categorising. The first step is to make a list of all the actors. It is important to consider if actors or groups are really a stakeholder or not, and why. When this is done it is time to map the different stakeholders. Describe for every stakeholder its possible interests and whether the stakeholder might benefit or be harmed by the issue, the role the stakeholder has in the process, the impact (positive or negative) a stakeholder can have on the process or issue and the relative influence a stakeholder has. When this is done the stakeholder can be categorised.

2.4 Categorising stakeholders

To do a useful stakeholder analysis it is thus not only necessary to have a good knowledge about the socio-economic and political environment of a specific situation and the actors involved in the issue, but it is also necessary to assess the possible impact that a specific change, or policy, will have on a stakeholder. Below a way to categorise and scale

stakeholders is worked out. This just an example. Many ways to do stakeholder analysis and to categorise them, with diagrams and other tools, can be found on the internet. Stakeholder analysis is a tool that is used often by NGOs (being part of, for instance, a social impact assessment).
The Worldbank identifies four main elements that are relevant when considering stakeholders, their relevancy, their interests and their influence. Those are:
'position *on the reform issue,*
the level of influence *(power) they hold,*
the level of interest *they have in the specific reform,*
and the group/coalition *to which they belong or can reasonably be associated with*[v]*'.*

According to the Worldbank categorising stakeholders in this way:

> 'provides a detailed understanding of the political, economic, and social impact of reform on interested groups, the hierarchy of authority and power among different groups and the actual perceptions of the reform among different groups, all of which are important for reform advocates to consider'

When stakeholders are listed, mapped and categorised they can be grouped into other categories[4] as well. An example are the following four main categories of stakeholders 'to guide strategic responses', in which stakeholders are categorised by their power and salience. Those categories are:

- Promoters (High priority, High impact)
- Defenders (High priority, Low impact)
- Latents (Low priority,high impact)
- Apathetics (Low priority,low impact)

Another categorization can be made based upon influence and stake. This categorization can be visualized in the following matrix:

	Low influence	**High influence**
Low stake	least Priority Stakeholder Group	Useful for decision and opinion formulation, brokering
High stake	Important stakeholder group perhaps in need of empowerment	most critical stakeholder group

Putting stakeholders in groups like these can improve insight in the situation of relevant stakeholders and help by determining strategic actions and options. Again, this is not the only way to do this. A well-known method is the Venn-diagram, but there are many others as well. The best way is probably is to look at different methods and decided what

[4] This categorization can also be found in other literature

way of categorising suits best for the situation at hand. In appendix 1 extra examples about categorisation can be found.

2.5 Stakeholders in Stara Kamienica

Typically stakeholders are community-based organizations, NGOs, communities, municipalities, public institutions, private organizations, companies, political authorities etc. Stakeholders in the village of Stara Kamienica can be found in the same social groups. Of course there is the mining company Pol-Skal and the local authorities. Furthermore there are the provincial authority (voivod), the local population, environmental NGOs, local action groups and, of course Nemo. Stakeholders can be analysed by position, group, interest and
influence. Although it was not possible to do full stakeholder analysis we want to describe some of the main actors in the mining-case and try to make clear how a stakeholders can be described and identified using the concepts of positions, interest, group and influence.
Local citizens and the municipality are, of course, important stakeholders. It is obvious that those groups should be included in the decision making process as they are the ones that will have a mine 'in their backyard' in the future. Their position seems to be clear as they have already protested against the plans. The interests of local citizens could not be investigated by the team, but one can imagine that they want their environment to be secured. Also the influence local groups, citizens and authorities have are hard to assess from a distance. Especially as real influence may differ from person to person and also from formal powers.
Pol-Skal is of course another very important stakeholder as they are ones that want to deploy business in the area. The position of Pol-Skal on the plans and their interests are pretty obvious, as well as the group they belong to (private sector). The influence the company has is, however, more difficult to assess. It is not known if they have contacts with people in political positions. Maybe they have formed coalitions with other business etc. Those, and other issues, have to be analyzed, but this may prove to be no so easy.
The provincial authorities are, of course, one of the most important actors, as they are the ones that have to make the decisions and constitute strategic development policies for the region. It is clear to what group they belong (government) but their exact position on the plans is still unclear. Of course the interest of the provincial authorities is development and economic growth. But the question is in what ways they envisage this, and how they want to accomplish this? Does the province want to do this via industrial development or in other ways? The fact that a decisions is still under assessment makes it hard to define their exact position. Determining the exact position, interests and influence of specific stakeholders may not always be easy, but using these concepts gives a good insight. We think that Nemo should be able to assess these things as they are working in the area for years and because they are well acquainted with local actors.

2.6 Conclusion

As said in the introduction a stakeholder analysis, among other things, provides insight in the social dynamics around a specific issue, the groups involved, power struggles between those groups and their differing viewpoints, and may provide a starting point for the determination of (lobby) strategies and the pursuit of specific strategic options. An accurate stakeholder analysis can help Nemo to increase its understanding of the socio-political dynamics around the mining-issue in Stara Kamienica. By visualizing possible partners and relevant stakeholders and by analyzing them and their positions and possibilities Nemo can look for suitable partners to form a coalitions for its lobby. The amc-team tried to present a framework to conduct such an analysis as the team was not in the position to conduct such an analysis itself. We tried to provide a basis that Nemo can use. A last remark that we want to make is that Nemo not only can use the results of a stakeholder itself, but that Nemo can also use those results to show the decision making authorities that certain relevant groups are left out of the decision making process; and are thus denied representation or participation.

3. Economic, environmental and social impacts of mining

3.1. Introduction

This chapter deals with the mining industry for the extraction of feldspar in Poland. There is already a lot of information available about alternatives for mining in Stara Kamienica (see reports from other AMC groups etc), so the aim of this chapter was to dig deeper into the mining industry itself.
A difficulty that we faced in searching information, was that it was not always easy to decide which information is reliable. A lot of information about mining is very coloured by the source, and the interests that are behind this provider of data. On the one hand there are reports that are made by the mining industry itself. They stress the message that nowadays mining is not only profitable but also sustainable, and that it can even improve the environment. On the other hand there is information by the anti-mining lobby that shows disastrous cases where a landscape is destroyed, the environment heavily polluted, and where the local population is being chased away from their land without any compensation. Confronted with this contradictory information it is not easy to get to an independent ´academic´ opinion, but we have tried to be open to different perspectives. We hope that our findings are valuable for all parties, and especially for the ones in politics who have to weigh different interests and make an independent decision. We have also tried to keep the balance between looking at the particular situation of feldspar mining in the village Stara Kamienica, and broadening our view by making a comparison with other mining practices all over the world.
In the next paragraphs of this introduction we will give the kind of technical information that both nature lovers and sociologists usually are not very familiar with. To get an idea about all aspects of the discussion, we will explain what open pit mining actually is, what the mineral feldspar is and what it is used for.
In the second paragraph of this chapter we will deal with the environmental consequences of mining. To get an idea of the context, some environmental issues that are important in Poland and especially in Lower Silecia are discussed. General environmental issues associated with mining are mentioned, and then more specifically the kind of environmental issues that can play a role with this type of mining in this area.
The third paragraph follows with an economic part; we will first put mining in the context of the Polish economy and discuss some global developments that are important for the mining industry in general. Information about the market for the mineral feldspar is given, the way mining can contribute to employment is discussed, and we give an indication of possible positive and negative impacts on the local economy.
Then we will move in the fourth paragraph to the issue of socio-cultural impact of mining. Because we were not able to do field research, we have used other cases as an illustration to learn from, and we provide a theoretical framework for reflection about the impact of mining on a local community.
In the whole discourse about mining, the idea of sustainable mining is very important. We will give that concept attention in the fifth paragraph of this chapter.

By the end of this chapter the reader should have an overview of the possible environmental, economic, and socio-cultural impact that mining can have, in general and in this case. We were not able to carry out a study that can proof what the impact really will be, but after reading this chapter the necessity of such a study should be clear. At the end of each sub-chapter there is a short summary and at the end of the chapter (paragraph 3.6) there is a conclusion of the findings.

3.1.1 What is open pit mining?

Mining can be simply defined as the process of extraction of valuable minerals or other geological materials from the earth. A definition of an open-pit mine is: ´an excavation or cut made at the surface of the ground for the purpose of extracting ore, and which is open to the surface for the duration of the mine´s life.´[vi] The term open pit mine is used to make the difference with mining methods that require tunnelling through the earth. This form of mining can be used when an orebody is close to the surface and is big enough. Open pit mines can be used for coal-mining, metal ores such as copper, gold, iron, aluminium, and many minerals (including feldspar).
The mining is carried out in different phases. First there is an exploration, when the first drills are being made to find out if there is indeed an ore under the ground. To determine the quantity, more drills have to be made to make a projection. Depending on the outcomes of the projection the mine can start to operate. In the exploration and projection phase already big investments are being made, and usually this leads to operation. (except of course if there is not so much ore as expected, but a company cannot permit itself too many mistakes in that)

Figure 1 shows a typical open pit mine. It shows that the walls are stepped, because usually open pit mines consist of several layers. The vertical part of the wall is called the batter, the horizontal part is the bench. Depending on the type of rock and structural weaknesses in the rock, the betters can be made with a slope that is less vertical. Benches are usually on 3 meter or 6 meter levels, depending on the size of the machinery being used. The steps in the wall help prevent rocks falling down the entire face of the wall. In bigger mines several benches may operate at the same time. Typically at the side of the pit a road is built on which trucks can drive to carry ore and waste rock.

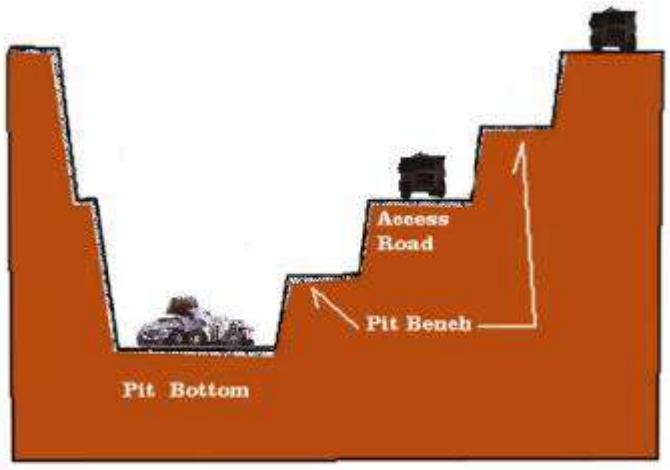


Fig. 1

In figure 2, it can be seen how the mine looks cut over the long side. The mining for the ore starts at one point, and continues over the whole length, until everything is extracted.

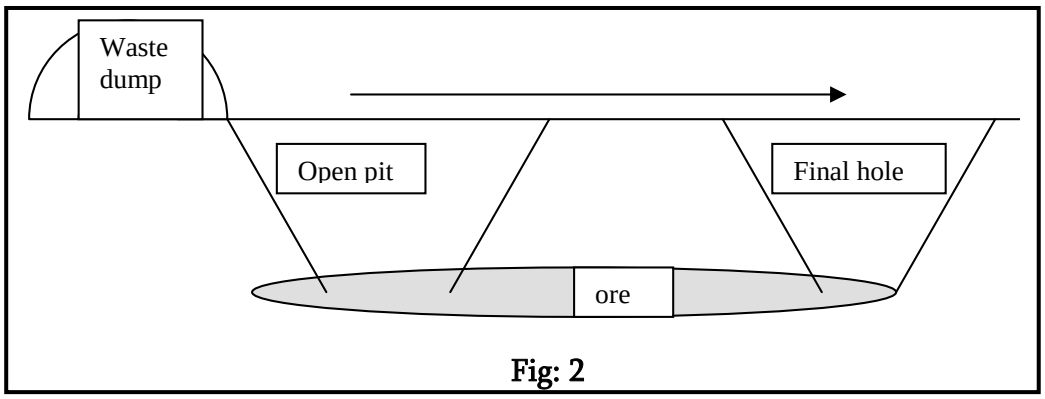


Fig: 2

Waste material is piled up at the surface near the edge of the open cut. This forms a hill, known as the waste dump. As mining continues (as in the figure from left to right), the continuation of the pit is being filled by additional waste, until all ore is extracted. Typically the end situation is a waste dump, and a final hole where the last ore has been mined. The open pit mines are sometimes converted to landfills for the disposal of solid wastes. The final situation depends on environmental regulation.

Reclamation plans can include drainage control, preservation of top soil, segregation of waste material, erosion and sediment control, solid waste disposal, control of fugitive dust, regarding, and restoration of waste and mine areas. It is important to incorporate these concerns form the beginning, because it is one of the factors that determine if the mine will be economically viable. The extent of reclamation that is required by the regional environmental regulations influences the profitability of the mine.

From an economic point of view, the main objective in a mining operation is the exploitation of the mineral deposit at the lowest possible cost with a view of maximizing profits. This is of course dependent on the price of the ore, but also on the amount of waste rock that needs to be mined relative to the amount of ore. This is called the stripping ratio. To be profitable, an open pit mine must be designed so that the cost of mining the waste rock does not exceed the value of the ore. For example in gold mining, in certain cases 0.75 grams of gold per ton of waste rock is still economic.

Mining always means a big investment. Smaller companies are relying on loans from banks, while bigger companies are their own banks. However, the mines have a higher chance of being profitable if they start fast, to have a quick pay-off. If an orebody is large and extends from surface to great depth, it is common to start mining near the surface from an open pit. This provides early revenue, while preparations are made for underground mining of the deeper parts. Obviously the planning of the whole project is important to know if it is profitable at all to start mining. According to mine-engineer.com: ´the planning of an open pit mine is basically an exercise in economics, constrained by certain geologic and mining engineering aspects.´ [vii]

3.1.2 What is feldspar?

Feldspar is not the name of a single mineral, but a group of minerals related to each other in structure and chemical composition. Together these rock-forming minerals make up perhaps as much as 60% of the earth's crust.
The name feldspar is derived from the German *Feld*, which means field, and *Spat*. The latter means any non-metallic mineral with a glassy luster that breaks on distinct flat surfaces. It was a prime constituent of many of the rocks over turned by farmers while ploughing their fields.[viii]
In the mining industry, feldspar is known as an industrial mineral. Chemically, the feldspars are silicates of aluminum, containing sodium, potassium, iron, calcium, or barium, or combinations of these elements. Feldspar is found in all rock types, including granite, gneiss, basalt, and other crystalline rocks. Feldspars are particularly abundant in igneous rocks like granite, which contains up to 50% or 70% of alkaline feldspar.
According to the Industrial Minerals Association North America[ix], granite is rarely used for its feldspatic content. Rather, a whole range of rocks geologically connected to granite is used. Most often, commercial feldspar is mined from pegmatite or feldspatic sand deposits. Aplite, which is a fine-grained igneous rock with the same mineralogical composition as granite, also is mined frequently for its feldspar content. The company Pol-Skal, however writes: "most popular feldspar rocks are granite rocks"[x]
The major uses of feldspar are for the production of glass and ceramics, because of their alumina and alkali content. In glass making, feldspar is an important ingredient. Feldspar is used in the production process as a flux. A flux is a material that lowers the melting temperature of another material, in this case glass. This also reduces production costs. In the manufacture of ceramics, feldspar is the second most important ingredient after clay. It is again used to facilitate the melting of quartz and clays. Feldspar does not have a strict melting point, but it melts gradually over a range of temperatures. This makes modulations in the melting phase of ceramic making possible. Feldspars improve the strength, toughness and durability of the ceramic body, and cement the crystalline phase of other ingredients, softening, melting and wetting other batch constituents.
Feldspar can be replaced by other minerals and mineral mixtures of similar physical properties. Possible alternatives for feldspar in glass and ceramics are clays, syenite, talc, pyrophyllite, cullet, kyanite, lithospar, etc. Another use of feldspar is as a filler and extender in applications such as paints, plastics, and rubber.
According to the Mineral Information Institute[xi] it is assumed that the supply of feldspar is more than adequate to meet demand for a very long time to come, because feldspar is such a large component of the earth's crust. It is so abundant that geologists and economists have not even compiled data on potentials deposits of feldspar for future consumption. Present mines worldwide are adequately meeting the need for raw feldspars. The firm Pol-Skal however mentions that "feldspar resources fit for industrial processing are very limited and for the most part nearly exhausted." [xii]

3.2. Environmental impact of mining

3.2.1 Environmental issues in Poland

Since the fall of communism in Poland in 1989, environmental issues have risen on the Polish government's list of priorities. Prior to the political changes of that year, however, Poland's communist government deliberately disregarded the environment. The push to develop the country's heavy industries meant that Poland was one of the most polluted countries in Europe (EIA).

Poland has made great progress in improving its environmental record since the collapse of the country's communist regime. Apart from closure of inefficient industries, especially the ones associated with high pollution, new environmental rules and regulations have been introduced. In an effort to provide a legislative framework on which to base the country's future environmental protection efforts, in April 2001 the Polish government passed the Environmental Protection Act, a kind of "constitution" of environmental protection. This is the guide to proper environmental protection throughout the country. The intention is to reduce emissions to the accepted European level, as far they are now the member of European Union since May 2004. The principles stipulated in this act aim to underpin appropriate and rational use of natural resources in Poland.

Even though the situation has improved since 1989, Poland still faces some serious environmental problems. Air pollution remains serious because of sulphur dioxide emissions from coal-fired power plants, and the resulting acid rain has caused forest damage. Water pollution from industrial and municipal sources is also a problem, as is disposal of hazardous wastes. Pollution levels should continue to decrease as industrial establishments bring their facilities up to EU code, but at substantial cost to business and the government.

At present the situation in Poland – averaged over the entire national territory – does not differ significantly from similar indices in western countries, but in Poland there are heavy polluting emissions concentrated in just a few areas.[xiii] The Ministers' Council of Polish Republic identified 27 "ecologically threatened areas", where indices exceeded national values. This area include the area of lower Silesia in south west Poland.

Many of the experts discussed how Poland's environment is suffering because some politicians are more interested in advancing their own careers than in helping to formulate sound public policy. It was also noted that many political and governmental leaders are entirely concerned with other issues and that environmental protection receives too little attention it has been identified that political decisions at all political levels, up to the highest government committees, are characterized by corruption and nepotism[xiv].

As an effort to reduce environmental problems and also comply with international environmental standards Poland has signed different international agreement as listed below[xv].

Party to: Air Pollution, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental

Modification, Hazardous Wastes, Kyoto Protocol, Law of the Sea, Marine Dumping, OzoneLayer Protection, Ship Pollution, Wetlands

Signed, but not ratified: Air Pollution-Nitrogen Oxides, Air Pollution-Persistent Organic Pollutants, Air Pollution-Sulfur 94

These are international agreements which operate together with national environmental policy and act. The identified weak governance plays a major role in poor performance of environmental protection.

3.2.2 The district of Stara Kamienica

The district of Stare Kamienica is situated in the Silesia region, located in south-west Poland, which has suffered severe environmental damage from numerous causes: air, water and soil contamination from out-dated industry; low emissions from coal-burning furnaces, and water pollution and toxic wastes from mining. It is lying in an area that is known as the "Black Triangle", because of it's heavy pollution. This border region of these three countries has been devastated by acid rain caused by emissions from industrial sources in Poland, the Czech Republic and Germany. This destruction must be taken as an example and lesson for the Polish government about the decision in the district of Stara Kamienica, in which Pol-Skal Company is on his way to do research on mining which will possibly be followed by mining extraction up on release of permit by the government.

3.2.3 Environmental problems in mining

Regardless of economic contribution of mining sector in some countries it also characterized by extensive and problematic legacy of abandoned mines and their associated environment and social problems. There are thousands of these types of legacies around the world.

Many studies claim that the extraction of mineral resources has a negative impact on environmental conservation. In addition to that there is claim about poor economic growth or contribution to respective countries[xvi] Many stakeholders have felt that the costs of mining outweigh its benefits. Though this claim has been focusing on developing countries, attention also must be paid to the countries which are in transition, e.g. Poland.

Past mining methods had devastating impact on environment especially in countries where there were weak environmental regulations. Though the situation still exists in some countries, modern mining companies in many countries nowadays are required to follow strict environmental and rehabilitation codes, ensuring that the area mined is returned to its original state, or an even better environmental state than before mining took place. Increasing expectations for environmental protection, desires for reducing human risks, competition for land and increasing value of the natural environment as recreational space have led to marked improvements in regulating requirements and mining practice in a number of countries. (VSEC Publications)

We will shortly mention some of the major environmental problems that are associated with mining, and then describe which environmental impact mining can have in the particular case of Stara Kamienica.

Mining (both underground and open pit) breaks and crushes rock, creating new pathways for oxygen, air and microbes to react with the rock. Thus, both underground workings and open pit walls may generate acid rock drainage (ARD), which can contaminate ground and surface waters for decades or even hundreds of years after mine closure. (Robert Moran).

Figure1.Tributary bearing acidic effluent contaminated with heavy metal Abrud River, Romania

Some major environmental problems generally associated with mining are:

- Mass movement of solid wastes often contains heavy metals and toxic compounds. See figure 1.
- Mass movement of liquid, or semi liquid wastes
- Water borne transport of wastes as suspended solids and as dissolved materials.
- Tailings
    - Mineral processing activities sometimes involve grinding the ore, adding various chemicals, and possibly several physical separation processes. These processes result in wastes called *tailings,* which contain numerous metal and non-metal residues form the ore, but also contain high concentrations of the process chemicals. These compounds may include kerosene and other petroleum-based or organic compounds, organic acids, cyanide and related compounds, various acids, lime, etc

Tailings contaminated stream after tailings release- Macedonia. Photograph by UNDP, Macedonia.

3.2.4 Environmental impact of mining in Stara Kamienica

The mentioned environmental problems can occur when toxic waste is exposed during a mining operation and they show what environmental risks there can be in mining. However, when mining for minerals such as feldspar the toxicity is probably not such an issue because it is a mineral that does not contain metals, and in extraction no chemicals are used. In the process when the feldspar is separated from the waste rock, some chemicals may be used, but we do not have specific information if this process can be

harmful. However, in the case of Stara Kamienica there may still be effects on landscape, ground water, dust and sound pollution, and biodiversity. We will briefly discuss these.

Deforestation

Mining requires big land for the extraction of minerals. In this case Pol-Skal has to dig the area by clearing the natural landscapes. So in the process of extracting the minerals the natural landscape is destroyed by clearing the soil and removing the vegetation. This impact is not only within the mining area but also within the neighbouring forest or land which is close to the company's land. The habitat of flora and fauna in the region is reduced which leads to more pressure on the land neighbouring the mine.

Mining and ground water

Apart from land-use, groundwater is usually the biggest problem. If there is a deep open pit, also the level of groundwater in the area around can get lower. For a large scale mining consumption of water is very high, if in the area there is shorted of water then the competition for this resource will be high and in most cases the inhabitant will suffer with shortage of water. Also in open pit mining, there is disturbance and disruption of the natural groundwater regime with the potential for both ground and surface water pollution.

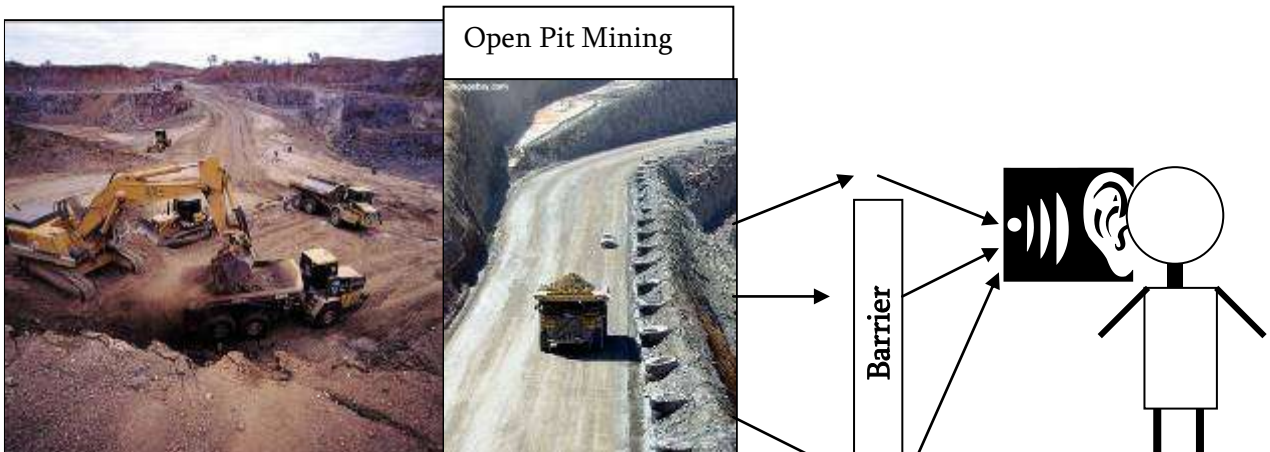
This mine in Stara Kamienica is so small; it should not expect to affect the level of groundwater around. They usually don't need water for the extraction of mining itself, but in the processing there is possibility to use water, according to T. de Jong.

Dust pollution

In most cases the processes of extracting the minerals is associated with using machines to dig the holes and take the soil from the lower ground to the upper. In this process there is a production of dust, which is depending on the nature of the soil. If the soil is made up with fine particles there is high possibility of producing high amount of dust, which causes environmental pollution and can affect the health of people around the area. Also in the transportation process by using big tucks can lead into dust pollution if roads are not made up of strong pave. There is a risk of airborne transport of pollutants such as dust, smelters emission, gases, and vapours.

Sound/Noise pollution

A noise problem generally consists of three inter-related elements- the source, the receiver and the transmission path. This transmission path is usually the atmosphere through which the sound is propagated, but can include the structural materials of any building containing the receiver (See Fig).



The mining in Stara Kamienica will produce lots of sounds during extraction of minerals and also carrying the equipments and minerals for processing and trading. The mining operation will act as a source of new sounds which will create noise or sound pollution there and in case of open pit mining sound pollution is a very common phenomena. There is a limit of sound that human beings can accept as natural sounds. But extracting of minerals through open pit mining in the village Stara Kamienica where there is less modern transportation and where the majority of land is covered by forest, natural landscape and mountains will produce sound pollution, which in most cases in intolerable as through open pit mining the upper crust extracted my machine or other mechanisms. The exact amount of decibels that the mine is going to produce needs to be examined in the environmental impact assessment.

Sound pollution creates lots of problems in society and for human activities. It creates annoyance to the receptors due to sound level fluctuations and due to its irregular occurrences it could cause displeasure to hearing and causes annoyance, the physiological features like breathing amplitude, blood pressure, heart-beat rate, pulse rate, blood cholesterol are effected, long exposure to high sound levels cause loss of hearing and it has an adverse impact on hearing function, the working performance of workers/human will be affected as they'll be losing their concentration, it causes pain, ringing in the ears, feeling of tiredness, thereby effecting the functioning of human system, it affects the sleeping there by inducing the people to become restless and loose concentration and presence of mind during their activities.[xvii]

Biodiversity

The issue of mining, biodiversity and protected areas is a very sensitive one. Industry, government, NGOs and local communities have different and often highly contradictory beliefs about how to use and manage areas considered valuable in biodiversity.
Obviously the operation of an open pit mine has a negative effect on the biodiversity of that specific site, in other words vegetation will be destroyed during the operation of the mine. The last years however, more and more attention is being paid to putting back the landscape in it's original state after mining, and mine reclamation should be part of every mining plan nowadays.
It is surely a point of discussion until which extent a landscape can really be brought back to it's original state after mining, and there are still uncertainties what will happen with the biodiversity of the reclaimed site.
According to T. de Jong, it sometimes happens that new species of plants and animals occur especially in a mining area after closure. In some cases biodiversity could even be improved after the operation of a mine.
Interesting in this respect is an article from Karin Holl[xviii] about the vegetation recovery on reclaimed coal-surface mines in eastern USA. She has done a study to find out to what extent vegetation is able to recover on a reclaimed mining site on the long term. The success of reclamation of a mining site is usually evaluated after five years, which is not enough to find out if there is a real recovery of original species. Holl has surveyed 15 coal surface mines that were reclaimed between 1967 and 1987, and compared these with areas in the same area where no mining had taken place. The outcome of her study is that "coal surface mines can recover a diverse native community fairly quickly, if appropriate site conditions are present. But it may be longer than 35 years before these sites host the entire completement of the local flora."[xix] She also gives recommendations what measures should be taken to stimulate vegetation recover.

3.3. Economic impact

3.3.1 General information about the Polish economy

Like most former communist Central and Eastern European countries, the Polish economy has experienced great political, social and economic changes since the turning point in 1989. There have been wide-ranging economic reforms and the economy has shifted from state-controlled to led by the free market.
Banking and lending policies were reformed and the newly reshaped ownership relations, independent enterprises and strengthened domestic competition had a big impact on the economy. There was also a revolution in the liberalisation of international trade. New markets in countries that had been treated not so long before as ideological as well as economic enemies were opened up to Polish companies. The EU and USA became the key directions in which Polish goods were exported.
As a consequence of the reforms, Poland realised a considerable GDP growth in the beginning of the nineties, increasing every year faster than the European average.

However, since 1998 the GDP growth rate in Poland slowed down. In 2001 GDP growth was 1.0%, for the first time since many years below the average EU level. GDP growth was back to 3.3% in 2005.
Unemployment rates jumped from zero in 1989 to 16.4 percent in 1994 and are currently around 20%.
Despite the substantial growth in the nineties of the last century the level of economic development of Poland remains clearly lower than that in the EU member states, with a GDP per capita of about 40.0% of the average EU level. The priority of the government remains economic growth.
Comparing the different sectors, it can be seen that the importance of agriculture in the economy has been systematically decreasing. Currently it is contributing to 2.8% of GDP, but still to 27.5% of employment. Current changes are that the number of the biggest farms is growing and these farms are enlarging. However, the number of the smallest farms is also growing, due to division of farms between persons who have lost their jobs outside agriculture. These are farming households, that produce only for their own needs with little, if any, commercial sales. High employment in this way absorbs official and hidden unemployment, and farmers are the social group with the lowest income. According to the Polish National Plan: ´Although it is considerably dispersed, Polish individual agriculture has the possibility to increase its competitiveness, especially in the context of sustainable development. If it complies with conditions of biodiversity, it has possibilities to effectively enter the ´export niche´ linked with the growing demand for ecologically produced food.´

The part of the services sector in GDP has been growing during transition, and currently employs 54.9% of the work force. The general direction of its changes is in line with world tendencies, which is caused by high participation of foreign capital in highly productive and profitable informatics, telecommunications, and financial services.
The industrial sector has gone through big changes during transition. Industries that are of main importance in Poland include machine building, iron and steel, coal mining, chemicals, ship building, food processing, glass, beverages, and textiles. In total the industrial sector contributes to 31.7% of GDP and 29% of employment.
During transition there has been a systematic drop in production and employment in high technique industry. Within the market-led economy many large state-owned industrial enterprises, particularly the railroad and the mining, steel, and defense sectors, could not adapt to the changes and had to downsize. Mechanisation and an increase in labour productivity was also a cause of people loosing their jobs. The consequences are unemployment and serious social problems in regions that used to be dependent of big industries.
The structure of the Polish economy has moved during transition to the more developed countries in western Europe, if you look at the part of different sectors in GDP, with agriculture and industry decreasing, and the services sector increasing. A difference is that employment in agriculture in Poland is still high.[xx]

3.3.2 Mining within the Polish economy

Under communism the mining industry as a whole was important for the economy, but was more politics than economics regulated. Already in the 1980´s some non-profitable mines were shut down.
Currently, mining still plays a significant role in the Polish economy. The most important types of mining are copper and coal. More than 3% of worldwide output of both copper and coal is coming from Poland. In 2003, Poland was the second ranked producer of copper in Europe and Central Eurasia after Russia. Altogether the mining industry contributes to 2% of GDP. The Polish government still continues the process of privatisation of the mining industry, therefore the number of state-owned enterprises has gone down to 33 in 2002. Because of steep rising metal prices on the world market there is a revival of foreign interests in the Polish mining industry.
Considering industrial minerals, Poland produces a broad range that included calcareous and silicate rocks and aggregates, clays, feldspar, gypsum, magnesite, salt, and sulfur, which serve the needs of the country's chemical and construction industries.

3.3.3 Development of mining on the world market

According to T. de Jong, currently it is a beneficial time for mining. The market for raw materials is under a high pressure because of a continuously rising demand from Asia. It is a positive time, benefits are increasing and there are many new initiatives.
This observation is being supported by other sources. According to the International Institute for Environment and Development[xxi], one of the most important developments in the global mining industry in the last decade has been the rapid development of China in the world market. From a small exporter
of minor mineral commodities, China has become a significant influence in virtually all the major mineral markets by virtue of the sheer volumes it is now using, importing, and exporting during its rapid industrialization.
Chinese use accounted for one-third of the entire world growth in copper use between 1990 and 2000 and 40% of world growth in aluminium use. China is the world's largest steel producer and user. The growth in production has moved China's share of the sea-borne market for iron ore from 4% in 1990 to 16% in 2000, accounting for 60% of all growth in this market. China is expected to import more than 80 million tonnes in 2001. In the last two years, China has also become a significant exporter of coal, doubling its share of the traded coal market from 6% to 12%, and it is expected to export in excess of 75 million tonnes.
According to the report of Euromines: In terms of the general consumption of metals, China today consumes 17% of the world's metals production and this is growing at an annual rate of 12 %, This results in a 2 % growth globally of all metals. Similar figures could be established for the consumption of industrial minerals since they are similarly linked with many consumer products. Taking into account the Chinese population growth a longer strong increase in consumption can be expected.

Considering the mining of industrial minerals in Europe, extraction is undertaken in all of the EU member states, although some countries have more significant production than others.
This sector in the EU is mainly composed of small and medium-sized enterprises. However, it also includes some of the world's leading international production companies, operating on a global basis such as in talc. Processing of the minerals before sale can be relatively simple (mainly crushing, grinding and classifying) but may also be more sophisticated for some mineral types (e.g. mineral sorting by flotation, laser optics, magnetic separation, or calcination)

3.3.4 The market for Feldspar

Now what about the market for feldspar as a mineral in particular? As described before, the main uses of feldspar are for the production of glass and ceramics. So we will give expectations for the global market for glass and ceramics and the production of feldspar, compiled from the summary of a Roskill report.[xxii]

Mainly in Italy, Spain, and China, there has been a strong growth in the production of ceramics over the past 20 years, and it will remain a major factor for future growth. Rising demand from domestic ceramics companies in Italy and Spain has driven an average annual increase in feldspar consumption of over 11% between 1991-2001. Despite the effects of the Asian crisis, equally high rates of growth have been seen in the ceramic industries of Asia. Production of ceramic tiles in the 20 leading countries increased from 2,950Mm2 in 1995 to over 4,100Mm2 in 2000. Chinese production increased from under 230Mm2 in 1995 to 450Mm2 in 2000. The ceramics industry consumes around 7.7Mt of feldspar and nepheline syenite each year, accounting for around 55% of total world demand and over 70% of European demand.

The second largest market for feldspar is the glass industry, accounting for 35% of world demand. The market for glass grades of feldspar and nepheline syenite is being weakened by the increased use of cullet in preference to mineral raw materials and, in the case of container glass, by the use of alternative packaging materials. Container glass, which uses more feldspathic materials than other sectors of the glass industry, is facing strong competition from other forms of packaging. However, the positive environmental image of glass over other forms of packaging, particularly PET bottles, has helped glass to recover some of its lost market share. This advantage may become less important as the recycling of PET rises in EMECs. The glass industry is therefore expected to show relatively slow rates of growth in feldspar demand. In Asia flat and fibreglass industries were severely affected by the fall in demand resulting from the Asian Crisis of 1997/98. In Europe and the USA flat glass production continued to rise in the 1990s but stagnated in 2000.

On the supply side competition is expected. Companies in China, France, Italy, Thailand, Turkey and the USA accounted for around 65% of world feldspar output in 2001. The strong competition between producers for the major ceramics markets of Italy and Spain is likely to keep European feldspar prices low, and the development of a potential new

project in Egypt would also probably have a negative effect on European prices. The development of the very large Chinese feldspar industry to support domestic demand and exports will exert a downward pressure on markets in the Far East.

3.3.5 Employment

The number of people employed in mining and minerals processing has been in decline. In some countries, such as the UK and Germany, employment has fallen as mines have closed or production has decreased and the sector became less important. More generally, most of the industry has become more capital-intensive due to technological change. To be competitive, companies need to modernise and reduce labour forces. This is even more so in Europe, where labour costs are high, compared with the rest of the world. In Eastern Europe and the former Soviet Union a decreasing employment is also caused by changing structures of mining enterprises.
This decrease in employment causes substantial new challenges for local communities and regions that traditionally were dominated by the extractive industry, who will need to look for other forms of future employment opportunities to ensure the viability of the communities. (annual report Euromines)
The general trend for a decrease in employment is illustrated by the case of South Africa, where 360,000 mineworkers, or 46% of the industry's 1990 work force, lost their jobs between 1990 and 2000.
Another example of how capital-intensive technologies influence employment is in the steel industry. Global steel production has risen by approximately 30% in the past 25 years. Over the same period, estimated employment in the major steel producing countries (excluding China) has fallen from around 2.5 million to fewer than 900,000 people. This enormous reduction – more than 60% – has been the result of major capital investments by steel companies in steel-making processes and technologies.[xxiii]

3.3.6 Contribution of mining to the local economy

After this macro-economic analysis of the mining industry, we will turn our attention to the economic impact of mining on a local level. Mines can become key economic engines of the communities in which they are located. When trying to find out the relationship between mining and poverty reduction, in some cases the results are promising, but only when mines are utilized properly. We will give an overview of positive and negative impacts that mining can have on the local economy and the contribution of mining to poverty reduction.

Positive impact

- **Foreign exchange income**: Where there is Commercial-scale mining it can be an important source of foreign exchange and financial revenue to the country. When managed well, the net foreign exchange and taxes generated by mining can be used by governments as an engine for overall economic growth and as a source of financing to support national budgets for social-sector and poverty reduction program. If there is a

proper development plan the benefits can go to the entire local community. This has a potential in our case, as 'Stara Kamiencia municipality is part of the lower Silesia province which is among Poland's leading regions in terms of the number of companies with foreign capital and the amount of the foreign capital invested. ' [xxiv]

- **Direct Income generation**: Mining can provide employment to the people. Although this is more applicable to small scale mining, when there is proper arrangement and an agreement is well set up, a mining company can provide training to the local people to hold post in large scale mining companies. In addition, especially large mining scale is often accompanied by growth of small enterprises activities as a source of services to the companies and community at large. When local people engage into this small enterprises it generating substantial income for their families and country at large.
- **Local social development.** In some cases when mining industry operates in local community it contributes to a large extent in local development. In most cases mining company provide public will contribute in construction of road for transportation of their products. This road can help local people in other economic activities.

Negative impact

- **Economic development**;
    - In the case of mining closure it ends up with sudden end of economic opportunities and employment to the local community.
    - Competition for resources between the company and other sectors in the mining area can lead to barriers in the creation of other economic sectors. Examples of these resources are like water, land, roads etc. In the case of Stara Kamienica there will be a tension between land-use for mining and the development of tourism.
- **Socio-economic factors**-
    - Dependency on mining related infrastructure tends to collapse after mining closure. This has impact as the local community can not have access anymore.
    - Can lead to food insecurity because of loss of agriculture land. This is more problematic to vulnerable group in society
    - Mining is an inflexible sector, which requires sector specific infrastructure like power grids, ports etc, and also requires investments in specialized physical and human capital that are unusable in other production activities which lend a degree of rigidity to the economy. This is more problem when it comes to the closure point of the mining industry.

3.4. Social-cultural impact of mining

3.4.1 The importance of Social Impact Assessment

With the utilization of natural resources including minerals, some positive and negative impacts on social context can be identified. A Social Impact Assessment (SIA) is very important before the starting of a project because social effects are often irreversible and need to be known to all parties involved with the project. The importance of Social impact assessment is to predict the impact in advance and to determine who wins and who looses. The major objective is to ensure that development associated with the utilization of identified resources, in this case minerals, maximizes its benefits and minimizes its cost[5], especially those cost borne by people. So doing SIA becomes important as after identifying possible impacts, a decision can be made whether the investment should proceed and how it should proceed. Also the mitigation measures can be implemented to minimize the harm and maximize the benefits.

Canadian indigenous people negotiations with mining company

In Canada, BHP Billiton has been operating Canada's first diamond mine, Ekati, in the Northwest Territories since 1998. This mine is often hailed by Canadian government officials as a model example for other countries as they consider how best to engage with Aboriginal communities. In addition, since Ekati started operations, there has been a rush to explore and develop other diamond mines in the area. The Aboriginal communities affected by Ekati have now also engaged with Rio Tinto (Diavik) and De Beers, two other large multi-national mining companies.

As part of the permitting process, mining companies are under political obligation to consult with affected communities and negotiate Impact Benefit Agreements. In addition, the communities participate in negotiations around Environmental and Socio-Economic Agreements between the Government of the Northwest Territories and the companies

Some of aspects which are included in the local community agreement are as follows

Impact Benefit Agreements

- Health and wellness programs
- Education programs
- Annual payments
- Dispute resolution mechanisms
- Sometimes there are scholarships and funding for cultural activities (e.g. caribou hunts).
- Establishment of independent monitoring agencies
- Compliance
- Security deposits

Impacts should ideally be assessed twice, once without the ameliorative effect of mitigation measures and then again after proposed management measures are included in the equation. This should be done to determine whether a project is able not only to manage its negative impacts through good community development programs but even to have a positive contribution to sustainable development.

[5] Costs associated with mining sometimes are not quantifiable or easily measured which makes them often not taken into account by decision-makers, investors and other responsible authorities.

3.4.2 Organisation of the local community

Indigenous People around the world are increasingly affected by mining and other development activities taking place on their lands. Social research in the developing world has shown that these people often are unaware of what their rights are in these situations, or what options they have for dealing with companies, NGOs and government who approach them with potential projects to develop or conserve their lands. Some are sitting with panic; others with loose hope at the same time in other places other are gain experiences on how to negotiate in this kind of stressful moments.

Case in Philippines

The province of Oriental Mindoro, Philippines, had long been opposing the entry of mining operation of Mindoro Nickel Project (MNP) by Aglubang Mining Corporation and CREW Minerals-Philippines, both owned and controlled by CREW Gold, A/S, a Canadian mining company based in the United Kingdom. The MNP proposed to operate in the 9,720-hectare mining concession, an area considered as critical watershed of the province and it also overlaps with the ancestral domain claims of the Mangyan indigenous peoples. *http://www.minesandcommunities.org/*

Different studies proved that often there are substantial social and economic benefits to local communities from mining operations, but they do not come automatically. Proper arrangement must be in place to make the benefits sustainable.

The study done by 'In Country Research' (together with the International Development Research Centre (IDRC) of Canada and the World Bank department of mining in five different countries including Canada, Spain, Bolivia, Chile, Peru) with the objective of examining the economic, social, cultural, and environmental effects of the mining operations on the communities, comes up with promising evolution in the positive contribution of mining to the local communities.

This study confirmed that sustainability is closely related to local participation of the neighbouring communities in the decisions affecting them. The Canadian case proved to be more participatory in the sense of increasing local communities' participation. The participation mechanism which they call *trilateral* dialogue proves to be useful because in this type of dialogue three important stakeholders- community, the company and the government are involved in

The Lisheen zinc/lead mine in Ireland

Before construction could start on the Lisheen mine, Anglo American had to obtain a planning permit, an Integrated Pollution Control (IPC) License, and a mining lease. They also had to convince the local community and the regulatory authorities that a mine at Lisheen would bring considerable benefit to the region and not damage the environment. The mine is located in the rural heartland of Ireland. The main areas of concern were the deposition of tailings and the potential contamination of the groundwater.

It was agreed that 51 per cent of the tailings would be mixed with cement and used as backfill underground, while the remaining 49 per cent would be deposited in a fully lined tailing storage facility located on a peat bog. The company also undertook to sink replacement boreholes for the farmers. Before granting the IPC license, the authorities required the company to lodge a bond in excess of US$16 million to pay for closure and rehabilitation costs.

The company decided to adopt a policy of transparency, and held meetings and consulted some 20 local groups. As a result, the company received positive support from the local communities and the licenses were granted without the need for a public hearing.

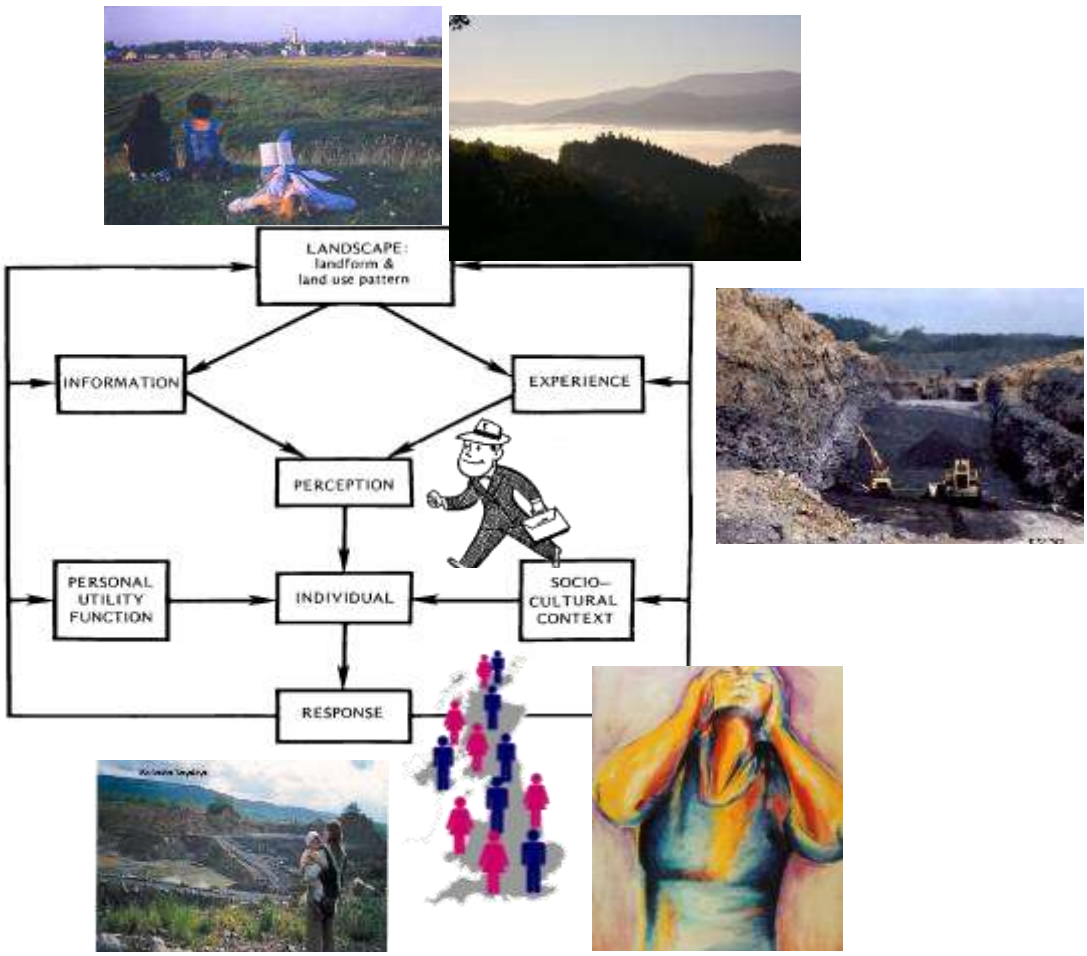
Source: MEM (1998); Stokes and Derham (2000)

discussion with direct communication with each other. The concept of social license was important, which implies that not only legal license provided by the company but also the social license form the local community to decide whether the company should mine or not based on benefits associated with local people. Therefore it is important to consider the wishes of the people living in Stara Kamienica concerning the mining activities.
The examples of different local communities that dealt with mining, and other activities on their territories, could be useful for local people in Stara Kamienica to get inspired how they can get aware of their rights and possibilities, build up their confidence and to negotiate with the mining industry to make their wishes heard.

3.4.3 Landscape and Mining

Open pit mining always has some effects on the nature, ecology and landscape as open pit mining always is an alteration of the natural environment, landscape and heritage through extraction of minerals. The landscape is the representation of relationship of human and nature as human as a static receiver and processor of information of the landscape and this concept of landscape draws upon ideas developed in the perceptual and cognitive branches of psychology. It is most prominent in the substantial body of research that has been developed in the field of landscape perception and, in particular, in the area of perception of scenic beauty or aesthetics[xxv]. A human being is viewed as a static observer who thinks about or responds emotionally to the landscape and also acts as an active participant in the landscape - thinking, feeling and acting[xxvi]. Human as a generator of impacts[xxvii] and is characterized as an agent of change in the physical and biological characteristics of the landscape[xxviii]. Human-induced changes vary in scale, intensity and type and its include soil erosion, air and water pollution, landscape conversions from natural states to suburbs and open-pit mines, and from abandoned farm lands to parks and productive forests. Environmentalist and also industrialist always talk about ensuing requirements for environmental impact assessments (EIA) (A dominant force in the evolution of this conceptualization was the enactment of the National Environmental Policy Act in 1969). But within this conceptualization human is rarely considered as a actor who can act as a thinking and feeling organism. The major emphasis has been on the identification and mitigation of negative impacts. It has tended to ignore the positive aspects of human interactions with the landscape. EIA is now acting like a developmental fashion before intervention which considers physical, economic, social and cultural impacts through so called planned intervention process. There is huge evidence that can provide information of huge destruction of every aspects of human actor's life though the company or intervening organization conducts some EIA.
Human and landscape relationship is a complex one and that both the human and the landscape change as a function of the transactions which is drawn from the field of environmental psychology[xxix].
In a manner of speaking, there are reciprocal impacts. Some changes may be so small as to the imperceptible, while others may be blatantly obvious. The imperceptible changes in either the human or the landscape may, however, be cumulative and become perceptible only after numerous repetitions of the transaction. Changes in the landscape may be via

conscious human interventions such as building a trail in a forest, or by open pit mining. The obvious and significant difference among these various conceptualizations of the human landscape relationship is the implicit concept of the human. In the impact concept the human is viewed as an agent of physical and biological change in the landscape. In the second concept the human is viewed as a static receiver of information which influences his or her thoughts and feelings about, and responses to, the landscape. In the transactional concept, however, there is an active interchange in which the human not only receives information from observation but also from participation. It involves thoughts, feelings and behaviours and, it involves changes in the human and the landscape. Landscapes are not paintings or photographs to be viewed from some fixed position, but rather they are environments that surround and invite participation and exploration, they provide information from all directions via multi-sensory modalities - more information than can possibly be used - and, they have an ambience that reflects aesthetic qualities, the social context of the experience and the systemic qualities that help to characterize particular landscapes[xxx].



Based on Zube and Sell 1986) and the pictorial presentation is made by the AMC group-216

3.4.4 Historical Heritage and Mining

For the most part of its history Lower Silesia was a frontier land, and at the same time one of the richest regions of whichever country it happened to belong to. In the previous millennium, Lower Silesia passed through the hands of many rulers. It was under the rule of the Piast princes since 990, was taken over by the Czech kings in 1335, then by the Austrian emperors from the Hapsburg dynasty in 1526, and the Prussian kings in 1741. In the first half of the 20th century it belonged to Germany, and after the fall of the Third Reich in 1945 it became part of Poland again. Today, on the threshold of the 21st century and of Poland's integration with the European Union, Lower Silesia wants to carry on with its mission of being the meeting point of cultures and traditions and a consolidator of different civilizations; as the Polish driving force of development among European regions it certainly has the potential to do so. And Stara Kamiencia is important municipality in the province which is part and parcel of this areas historical and cultural legacy. This beautiful area situated north of the Giants' Mountains (Karkonosze) and Iron Mountains (Góry Izerskie) in the Jelenia Góra district in the south-west of Poland is a relatively unspoiled agrarian landscape offering huge quantity of cultural and natural monuments, including historical landscape elements; castles; palaces; mills; archaeological sites; old picturesque villages; and nature reserves. For European standards, this area is an important and monumental centre of European history with high tourist potential (Nemo, 2003). It natural forest and landscape enhance the tourist attractiveness and health resort aspects of the region. The diversity of the area has numerous tourist trails, picturesque landscapes; historical treasures and the climate make a place where even the most demanding tastes will be satisfied. It is also because the area is part of the Lower Silesia province which has hosts an average 4 million tourists a year. So the province has great potentially in tourism especially eco-tourism and agro tourism and Stara Kamiencia is important part of the province through its enormous potentiality in tourism with historical, cultural and natural heritage. Tourism also plays an important role in the region's economy. Thanks to favourable natural conditions, ampleness of historical buildings and the relatively well-developed infrastructure, Lower Silesia is one of Poland's main tourist regions.[xxxi]

3.5. Sustainable mining

Sustainable development is a developmental discourse as it always shows present-future conflict and interpretation. But sustainable development somehow brings environment, future generation as well as economic and social development on the agenda. Sustainable development can be defined as interminable socioeconomic progress without the destruction of the environment and can be achieved through the proper management of projects with possible harmful spill over effects on the environment. It is the duty of those involved in mining to prove that sustainable development can in fact be achieved through raising living standards without excessive environmental degradation.

The practical implication of sustainable development is that it must allow greater human utility of resources while simultaneously conserving the natural resource base. It might be argued that sustainable development is a contradiction in terms, but it can be realized through greater productivity in resource consuming activities by improving the output-input ratio. Through advances in resource saving technology it is possible to grow economically while conserving natural resources to support future life[xxxii]. Sustainable development ensures the mixtures of human, nature and intervention's relationship in social, cultural, economic and environmental aspects of everyday life and practice. As mining as on the one hand an intervention implemented by governmental or private companies and on the other hand altering the ecological and physical (both ground and crust portion of earth) of the earth, it has always some environmental, social and cultural effects. So sustainable mining is option for a mining company to ensure environment friendly mining or sustainable development. According Below (1993)' Sustainable development in mining can be achieved only through continuous exploration, technological innovation, and environmental rehabilitation.

Globally and domestically, the politics of mining are increasingly being played out at the local community level, monitored closely be a variety of media and non governmental organizations around the world. Investors, insurance companies, banks, governments, and citizens increasingly want little to do with an industry that is seen as indifferent to the present and future socio-economic and biophysical welfare of local communities. This is a message that has been communicated loudly by international organizations, such as International Council on Metals and the Environment (ICME) and the World Bank. Mining companies must now pursue their interests in a way that also promotes those of the local communities in regions where they are operating. The long term sustainability and viability of both the mining industry and its related communities justifies serious attention. Improving environmental performance and mitigating environmental impacts of mining are critical, but will not necessary suffice to ensure the social health and welfare of associated communities. It is necessary, therefore, to go further in considering what sustainability entails in the context of mining[xxxiii]. Sustainable mining emphasise people, society, physical, biophysical, economic and environmental aspects of everyday life. These are the core components to ensure sustainable mining whatever mining operation will be implemented in anywhere of the globe. In the case of minerals mining, the extraction of minerals, on the other hand, is exhausting a fixed stock of mineral deposits and cannot be maintained indefinitely. The environmental problems of pollution and land degradation associated with mining activities further question its sustainability. Technological advances in mining plant and equipment continue to improve operational efficiency. Sustainability of mining activity becomes a function of exploration effort and technological innovation to ensure economic viability. Sustainable mining have to consider the principles of ecological sustainability, economic vitality and social equity. These principles apply over a long time span, covering both the life of mine and post-mining closure. The legacy left by a mine to the community after its closure is emerging as a significant aspect of its planning. Progress towards sustainability is made when value is added to a community with respect to these principles by the mining operation during its life cycle. So Sustainable mining have to consider the present and post-mining impacts

on the community, environment and society where the mining operation will be implemented. Communications, education, cooperative decision-making and diversification are all important elements in long term community sustainability and also important for sustainable mining operations. These concepts are not new but the goals of sustainability mining may not be easy in reality. As Market imperfections which also do not properly reflect the cost to the environment have created exhaustible resources price levels lower than the socially optimal. Mineral producers of the developing world (the South) are unable to sustain mining development in the face of declining mineral price trends. If the inhabitants of the industrialized countries (the North) are concerned about global environmental degradation, they should be willing to pay mineral prices which internalize environmental costs. So sustainable mining always cost more than traditional mining and to ensure sustainable mining all the stakeholders should consider the price of minerals and other investment cost. How can a mining country like South Africa achieve sustainable development when its economy depends on the fortunes of the mining industry? It is also true for Poland as mining is played am important role in Polish economy, employment and progress. Though there are some good practices but sustainable mining should effectively realize a future requires that there be a net improvement in the biophysical, social and economic health of the local community wherever mining takes place.

A mining community is one where the population is significantly affected by a nearby mining operation. The community may be associated with mining venture through direct employment or through environmental, social, economic or other impacts. The community can range in size from a city (which could be serving as a base for distant 'fly in fly-out operations, or a centre for supplies and financing) to a village (which relies extensively on local mining). Communities vary in their profile and perceptions about mining and needs. In developing economics, serious challenges arise from lack of economic security and stability, and from quality of life issues. Many mining communities are in remote regions with few opportunities for diversification. There are, therefore, numerous challenges to making a mining community viable. A widespread public perception of mining is of a low tech, polluting and avaricious industry. In 1994, a US opinion survey conducted by Roper Research, ranked the mining industry in 24th place in terms of public popularity, below the tobacco industry[xxxiv]. Mining is seen as a hazardous activity, accompanied by acute environmental impacts. This interpretation is perhaps strongest among urban dwellers who have little awareness of direct benefits from mining, despite being the largest consumers of its products. Rural communities may welcome mining activities as an alternative source if employment. Nevertheless, in all mining communities, residents are demanding recognition of their right to live in a healthy environment and to share the benefits. Recognition of the needs and rights of a community are now being entrenched principles in public decision making throughout the world. As the global environment is which mining companies operate today is highly visible, they need to have a good reputation as being socially responsible. To achieve this, there fundamental considerations need to heed[xxxv].

- Environmental impacts must not pose any unacceptable risk to associated communities;

- Communication between the mining company and the community must be transparent and effective; citizens should be encouraged to share in decisions that directly affect their futures; this will help mining companies avoid risks to the sustainability of both their own operations and the community;
- Mining development must be perceived to bring a net benefit to the community (it is no longer enough to simply mitigate impacts). To achieve this community diversification must be part of mining planning, development, operations and post-closure.

The benefits a community can gain from a mine being developed in accordance with the principles of sustainability include the opportunity to diversify their economy and add value to the area. Values may include the enhanced benefits mining companies traditionally consider, such as: direct employment,; ancillary economic activity; water and power supply; transportation and other infrastructure; education, Health. However, companies need to think beyond that, about how the development of a new mine could bring long term biophysical and socio-economic improvement to a region in a way that is consistent with holistic principles of sustainability. This means that, to be sustainable, a decision should not result in a zero-sum equation where there is dramatic trade off between immediate needs and long term ecological integrity. Concepts such as conservation, heritage values and aesthetics, that commonly established principles in developed countries, are superseded by the struggle for survival and need of employment in poorer countries where choices are few and people are unable to plan beyond the immediate future. So it's the company, state and the civil society who are responsible to ensure sustainable mining operation through immediate and long term future of an area and its inhabitants. The global mining industry is facing many challenges in terms of human interaction with physical and social environments. Many companies have invested considerable resources in technological innovation to increase productivity and competitiveness. Benefits also relate to improved health and safety, as well as the quality of the environment. Attention still needs to be given to finding innovative approaches to establishing long term benefits for the communities created or enhanced by the presence of the mining operations[xxxvi].

There is no single formula to achieve sustainable mining. Adaptability, flexibility, responsiveness and respect for people and the biophysical environment, which we all depend on, are the principles upon which future mines need to be built if they are to follow a more sustainable path[xxxvii]. The people in Stara Kamienica, according to the information provided by the people who visited the region as a researcher, student or member of an NGO, are poor and they have very few alternatives for expanding their livelihood and promoting sustainable development. So the mining company Pol- Skal, the Polish governmental organizations and civil society should consider the mining operation through both long and short term perceptions and impacts. The European Union also provides a framework to guarantee the environmental liability of mining activities. In the next chapter the reader can find more information about this European directive.

3.6 Conclusion

In this chapter we have given an analysis of the mining industry, with the aim to provide information that can be used as a base to make a decision about the desirability of mining in Stara Kamienica.
While it was still under communism, Poland was one of the most polluted countries in Europe. Poland still faces huge environmental problems such as air and water pollution, forest damage, and the disposal of hazardous wastes. Also the district of Lower Silesia has suffered from heavily polluting industry. Mining is known for it´s devastating impact on the environment, but modern mining industries claim to work in a more environmental friendly way. The extent to which this actually happens depends on regulations by the local government. It is thus of high importance that the provincial government takes environmental issues into account. The most important environmental issues that can be important in feldspar mining in Stara Kamienica are dust pollution, noise pollution, lower level of ground water, destruction of landscape and decreasing biodiversity.
Economic reforms have caused considerable growth of GDP in the first half of the 90´s, that later stagnated again. The level of economic development remains lower than other EU member states and the government´s priority is economic growth. Under communism the mining industry was important in Poland, but was more regulated by politics than by economics. During transition mines have been privatised and non-profitable mines have been shut down. Mining still plays a significant role in the Polish economy, contributing to 2% of GDP.
Globally it is a beneficial time for mining, because of rising demand from China, and there are many new initiatives. Considering the market for feldspar, a steadily rising demand can be expected, mainly because of increasing production of ceramics. However, the strong competition between producers is likely to keep European feldspar prices low. Considering supply for the domestic market, the mineral feldspar can also be imported from other countries, e.g Czech Republic. Nemo should convince the provincial government to have a good look at the business plan of Pol-Skal to see how likely it is that this mine will be profitable.
Because of a move to capital-intensive technologies and an increase in labour productivity in mining, it is expected that the mining industry will contribute less and less to employment.
Positive impacts of mining on a local economy can be the contribution of taxes and foreign exchange income, direct income generation, and the creation of infrastructure for local development. Negative impacts can be problems after closure of a mine, barriers in the creation of other economic sectors (e.g. tourism), and health problems.
It is clear that economic growth is desired in this region in Poland. However, it is questionable of what kind this economic growth should be. Some advantages and disadvantages of economic activity by mining have been described in this chapter, and also the option of sustainable mining can lead to a different picture. Rural development is an alternative promoted by Nemo. Economically mining can be of some importance to the region, not for employment but for tax income. The benefit for local people depend on how much this will be and how it will be used.

Nemo should stress that the province takes into account all arguments for both options in their decision-making. Based on Environmental Impact Assessment (for research activities, extraction, and processing), Social Impact Assessment, the business plan of the company, and agreements about reclamation and investment of taxes in the local economy, the province should make a decision whether or not to develop mining activities in this region. Obviously the viability of other options such as tourism and rural development should be taken into account. It should be considered until what extent different possibilities for development are in conflict with each other. Sound agreements should be made about environmental protection during operation and after closure, because the extent of reclamation will depend on the regulations of the regional government.

4. European and Polish national framework for mining and sustainable development

4.1. Introduction

This chapter deals with on the one hand the Polish governance structure and on the other hand the rules and legislation connected to mining and sustainable development in the European union. The aim of this chapter is to give an overview of the possibilities of Nemo within Poland and in the broader context of the European Union to tackle the problems they are dealing with related to mining and sustainable development. The difficulty we faced in this chapter is that we are no legal experts. We tried to dig deeper into all rules and regulations within the European Union that consider mining but time as well as the lack of relevant expertise was a constraint to come up with a thoroughly overview of all ruling legislation on the subject. However this chapter can be used as a guideline for further research and to get an idea of the European Union's standpoint on the subject of mining as well as sustainable rural development.
Before we are going to talk about the frameworks that exist on European level, we will address the Polish political and organizational situation to gather relevant insights into the national situation that forms the layer between Europe and the local context Nemo is facing in Poland. In the second paragraph of this chapter the governance structure of Poland will be discussed together with the political climate in Poland at the moment and the difficulties of the Polish governance structure.

In the remaining part of this chapter (paragraph 4.3-4.7) we will give answer on the following central research question and sub-questions:

What can be considered relevant (E.U.) legislation for NEMO and how can it be applied with regard to rural development and mining in rural regions?

This central research question is divided in the following sub questions:

- What European legal framework is addressing the subject of mining and the environment?
- What European legal framework is addressing sustainable rural development?
- What regulations are relevant for the case of Stara Kamienca?
- What has the NGO Nemo been doing on the European level until this moment?
- In what way could Nemo use the insights of this chapter in their activities against mining?

First of all we will think about what mining means in the European Union and what role NGO's traditionally can play within the institutions of the European Union. Then there is the EU framework of mining. We chose to go deeper into the matter of three directives; Environmental Impact Assessment, Waste and Environmental Liability. We considered this the three main entrance points of getting insight into the case from a European

perspective. In the next paragraph we look at sustainable rural development and what possibilities NGO Nemo has of offering an alternative for mining in the region. By the end of this chapter the reader should have on the one hand an overview of the framework the European Union has offered to secure mining within environmental boundaries in the EU. On the other hand, the reader should get an idea what is also possible in the region if rural development is the chosen path. At the end of the chapter there is a conclusion of the findings and recommendations for NGO Nemo to use the possibilities offered by the EU.

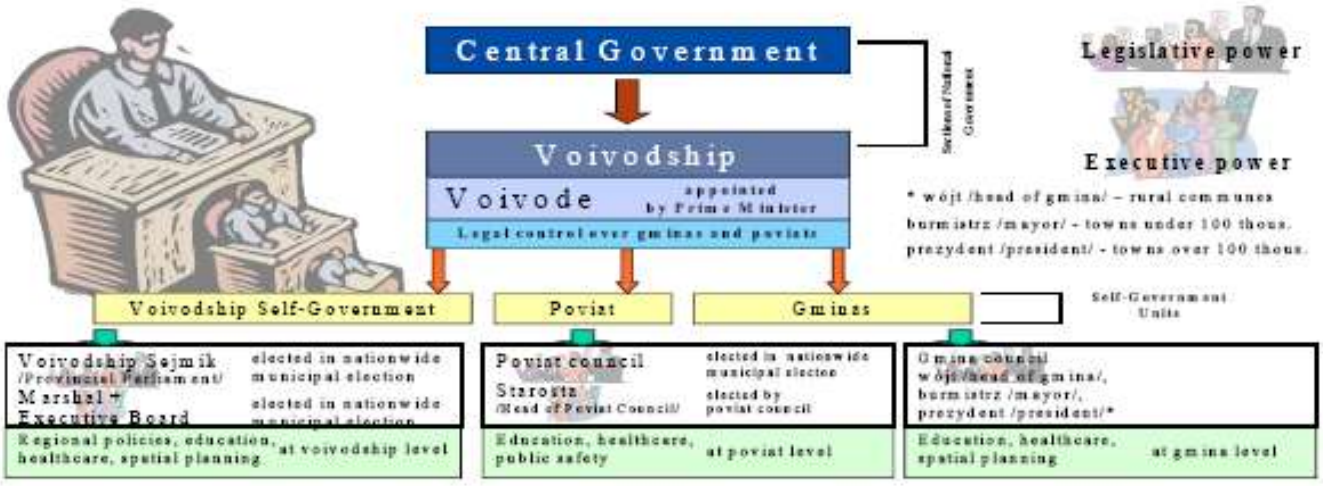
4.2 Political and organizational situation in Poland

4.2.1 Governance structure of Poland

Poland has a turbulent political history. For decades it was governed and invaded by other powers with the result that the current political system does not have a long traditional democratic history. The current democratic system was created after the fall of Communism in 1989 and still has to crystallize further. Remnants of the communist legacy and the 'systems of spoils' are still present in the Polish political system and stories about nepotism and corruption are present throughout Poland. Some knowledge about the political situation and problems within Polish governance may be of use for NGO Nemo.

Poland is a parliamentary democracy with several governmental institutions on a national, regional and local level. The current national administrative structure was installed after the fall of Communism, in1989. In the first free elections after Communism, the most important bodies, the senate and the lower house of parliament, The Senate and the Sejm, were formed in accordance with the constitution, which has been revised in 1998. Executive powers are in the hands of the president and the council of ministers. The Senate and the Sejm form the legislative authority[xxxviii].

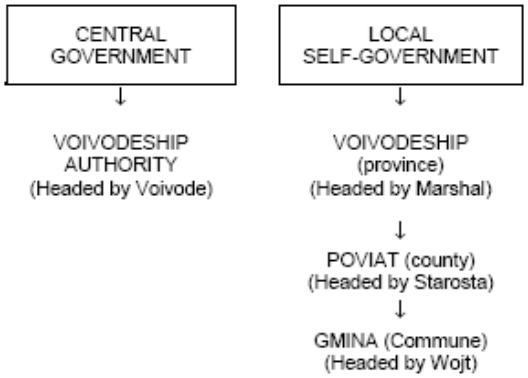
Regional governance takes place within 16 Voivodships, which are further broken down in 373 Poviats (counties) and 2489 Gminas (municipalities)[xxxix].



4.2.2 Local and Regional governance structure

Local municipalities in Poland are called gminas and the current municipal structure was formed after 1989. A municipality is governed by a council, which is elected by the local population, and a mayor, which is the administrative head of a municipality. Typical tasks for a municipality are waste-management, constructions of local roads etc., local administration, social welfare, administration of housing and so forth. The municipalities do not participate in the creation of regional development policies and the creation of other strategic policies. Municipal financial resources come from subsidies from the national government and local revenues from municipal property and different fees levied by the municipality. However, by far the largest part of the budget consists of government funds, which makes the municipalities heavily dependent upon the central government.
Although new administrative bodies were formed on a national level, after 1989, the regional institutions, or Voivodships, formed in the communist period, remained until 1998. There were forty-nine Voivodships and the head of the Voivodship (Voivod) was not democratically elected, but appointed by the premier in Warsaw. As such it was mainly an instrument and monitor of the national government in the regions and characterized by patronage and clientelism[xl]. The Voivodships did not possess many legislative powers and 'all financial resources were allocated from the central budget, with the large majority of funds earmarked as subsidies for specific social services, giving the Voivodships little flexibility in meeting the needs of their specific regions[xli].' In general most commentators are not optimistic about the functioning of the Voivodships before 1998: 'it was ineffective in stimulating and supporting the development of the regional economy and society[xlii]'.
After the implementation of the Self-Government Law in1998 the structure of the regional administrations was reformed again. New regional bodies have been erected and authorities of the Voivod(ships) have been changed or transferred. Furthermore the number of Voivodships has diminished to sixteen, and the main task of the voivod is now the monitoring of other regional institutions, with the Sejmik Wojewodzki being the most important. This Sejmik Wojewodzki has been created during the reforms of 1998 and is a democratically elected regional body. It typically consists of a council of 25-30 representatives from different districts (poiwats). Within the council they debate and negotiate regional development policy. The Head of the Sejmik is the Marshall and its executive body of 5 members, elected by the full Sejmik. The Semjik also typically possesses an apparatus of experts and support staff, totalling 100-150 employees (at present)[xliii]. The Sejmik Wojewodski is formally responsible for the creation of regional strategic development policies, which are evaluated by the Voivod and his staff. Tasks that used to be performed in the fields of, for instance, health, education etc. have been transferred away form the Voivod (to the regional council, which now has to monitor and evaluate those bodies). The most important responsibilities are laid down in the 'Land Utilisation Law', which defines all kinds of issues and responsibilities related to pollution, resources etc. It also gives outlines for local authorities for planning and development with regard to urban and rural areas, and industries.

The scheme below presents schematically the administrative hierarchy in Poland.
[xliv]



4.2.3 Current political climate

On the 29th of May the Dutch newspaper 'NRC Handelsblad' reported about the current nationalistic right wing political movement in Poland. It stated that at the moment nationalist and populist parties constitute a parliamentary majority, have delivered the president, and form the government. Since the elections held in September 2006, where the current political regime was able to come into power, this nationalistic regime is trying to reshape the Polish democracy towards a paternalistic system in a way that, according to the newspaper, shows a lot of similarities with the reforms of the Russian president Poetin. A representative of the nationalistic movement has even declared the Trias Politica contra-productive. Furthermore, the nationalistic regime tries to get its hold on regional and local governance and the media.
The current influence of right wing nationalistic and populist parties is mostly due to permanent campaigning against the political establishment before the last elections. Liberal parties were being accused of immorality and being damaging for the country and left wing parties were displayed as the 'leftist thieves' and 'red parasites'. The newspaper sees a deliberalisation in Poland as the current regimes accuses NGO's, lawyers, local governance every other couple of weeks. It has also announced an end to open solicitations for administrative positions. This to keep out 'saboteurs' it says. The attitude towards the European Union is also changing, in a negative way, as the president has declare that nationalistic interests have absolute precedence over other interests.
These political developments in Poland since the last elections can have far-reaching consequences. The regime is against further democratization of regional and local structures of governance and does not promote self-governance.

4.2.3 Difficulties in Regional Governance

Dornisch (1999) identified three main problems in the functioning of the regional administration in Poland, in 1999. First there is vagueness about the division of authority with regard to strategic policy-making. The vagueness predominantly comes from the somewhat double-natured character of the voivodship being a entity of regional self-governance but also a extension of the central governance. The responsibility for strategic

policy making formerly lies with the Sejmik, but 'the Voivodship' are also developing strategy functions within their apparatus'. Furthermore, laws and policies formed at the regional level have to be approved by the central government. In 1999 there was no agency or ministry responsible for this. The second problem concerns financial resources. Until 2000 the central government allocated finances among the regions as it saw fit, even though the regions are officially supposed to be self-supporting. A third problem concerns political dynamics within the regions. Dornisch reports that the Polish press has regularly reported about malpractices by regional politicians. Often the Sejmik is the political arena in which political feuds are fought and it is perceived that 'the central government's appointment of Voivods and their deputies (in most Voivodships there are two) has been driven by solely by political concerns. In a lot of regions there are tensions between the Sejmik and the Voivodship about what policies to pursue and political authority.
The central government also recognizes these problems. According to the Polish National Report on Regional Sustainable Development there are four main weak points in regional governance: Low level of identity, too many weak poivats (disctricts), a centralized system of public finance and integration in the EU. The report states that 'regionalism is rather a marginal phenomenon' and describes the opinion of proponents and opponents of regionalism. Opponents see it as a threat to the unitary character of Poland. Proponents think that it 'might become a vehicle for increasing competitiveness of Poland in the EU.'

4.2.4 Conclusion

Considering the above and the current political climate it will not be surprising that most commentators state that, although a lot of progression has been made towards further democratisation of the local and regional governance in Poland, there is still much work to do in that respect. Participation of non governmental actors and citizens is far from natural. This is due to reasons sketched before. Another factor for this can also be the absence of a culture of political participation in Poland under Communism. The government formerly sees two types of networks 'in the implementation activation of projects[xlv]' and states in the 'National report Regional and Sustainable Development Poland' that 'Poland is a large country, where liberal conditions promote creation of different non-governmental entities, resulting in setting up hundreds of institutions desiring to play an important role in a process of regional sustainable development'.
Considering the current political climate reality, however, in Poland probably differs. This something that Nemo has to take into account when organizing its lobby. Local and regional political arena's are often used to promote political interest and sometimes serve as political platforms for national parties. Forwarding and promoting plans for development cannot be done without support of local and regional politicians and the local population. Nemo thus has to be aware of the political dynamics in the region and try to form useful coalitions with relevant actors and stakeholders.
Before we are going to talk further about the EU frameworks on mining and sustainable development, we will give an overview of the role mining and NGO's play within the EU.

4.2. EU framework mining

4.2.1 Introduction

In this paragraph we present an overview of the legal framework that exists in the EU for mining. The legal framework of the EU is called community law. Community law is an independent legal system which takes precedence over national legal provisions. Primary legislation includes the treaties and other agreements. The treaties define the responsibilities of decision making bodies and the legislative, executive and juridical procedures which characterize European community law and its implementation. Secondary legislation may take the following forms: regulations, which are directly applicable and binding in all member states without the need for any national implementing legislation; directives, which bind the objectives to be achieved within a certain time-limit while leaving the national authorities the choice of form and means to be used; and decisions, which are binding in all their aspects for those to whom they are addressed[xlvi].

4.2.2 Mining in the European Union

The occurrence and concentration of minerals are highly variable throughout the Earth's crust. The new EU member states, like Poland (EU member since 2004), for example contain the bulk of the continent's natural wealth, including the last areas of wilderness and cultural landscapes. The extraction of minerals by humans exposes rocks and uses chemicals that can be toxic. Next to this, mining generates one of the largest waste streams in the European Union; 29% of the overall waste generation[xlvii]. However, strategic industries such as the mineral extractive industry received specific treatment in the European community legislation with a low control on it's environmental impacts. Mineral extractive activities are excluded from the scope of mayor environmental directives or receive certain freedoms for interpretation (T. Hamor, Environmental management vol.33, no2, 2004). Mining is increasingly influenced by other competing land-uses, such as agriculture, tourism and nature conservation. Therefore the development of EU legislation involves an analysis of environmental, economic and social consequences of the mining activities proposed. A balanced consideration of economic, environmental and social aspects to ensure the sustainable development of the mining industry is needed in the frame of a coherent community mineral policy.

4.2.3 NGO's in the European Union

Local, regional, national and international NGO's contribute to this process of balancing and securing the interests of local people by their call for sustainability. As such they form a counterweight to the economic interest of the mining industry. NGO's try to influence policy on all levels of government in all European member states. By lobbying within the institutions of the European Union, they can try to make coalitions to promote their case. NGO's can use different means to reach their objectives. They can work with elected

officials, bureaucrats and employees of cooperations. Working with elected officials, called lobbying, is the method most commonly used for organizations to exert influence on the national and international policy arena. Another way of influencing policy and decision-making is by campaigning and organizing public protest. This is a method based on generating publicity for their causes. This can lead to the promotion of media coverage of environmental issues. Most NGO's use this channel mainly through the provision of information and through being available for media interviews. Studies have repeatedly found that environmental groups believe the media to be generally sympathetic to their cause, and most groups actively use the media to get their message across to the public, mobilize potential allies, give legitimacy and support to their work and influence policy makers (Vig and Axelrod, 1999)[xlviii]. Nemo has tried to lobby on EU level in the past by contacting Dutch members of the European parliament. These people were representatives of the Green parties and had interest in mining in relation to sustainable development and environmental issues. In 2003 they asked questions to the commission about the mining plans. Because there was no violation of EU legislation involved yet, they got the answer that the commission had taken notice of the problem but could not do anything unless there was data and evidence of violation of the European directives and laws. Since this lobby contact in 2003, Nemo has not had other contact with European institutions. Since Poland has become a European members state, the Polish members of the parliament could be strategic partners to lobby for the case of Nemo within the EU. It is more efficient for a Polish member of parliament to ask questions about a Polish region than it is for foreign members. Another way of getting involved with the European Union is by applying for project funding. Nemo has not yet been in contact with European finance because they don't have the capacity and professionalism needed to apply for funding. The projects are too small and not integrated within bigger projects.

4.2.4 Mining

The council of ministers is the EU's main decision making institution and the final legislative authority and provided the following definition of 'mining extractive industries': *the activities of prospecting and of extraction in the strict sense of the word as well as of preparation of extracted materials for sale.* The EU treaties declare the prudent and rational use of natural resources to avoid their unconsidered exhaustion. The European commission has three functions: initiator of proposals for legislation; guardian of the treaties; manager and executer of the EU policies and international trade relations. Commission communications have no legal outreach on member states but they contain community policies and action plans.
The communication from the commission , "Promoting sustainable development in the EU non-energy extractive energy" (2000) was the first document to tackle the problem of sustainable mining. In spite of its limited scope it made valuable statements, such as: mining is increasingly influenced by other competing land uses, such as urban development, agriculture, nature conservation and tourism; The balanced consideration of economic, environmental and social aspects to ensure the sustainable development of the

industry is needed; A coherent community policy is necessary. This means that mining has to fit within the community and decision makers should weight which land use is most suitable for their region.
From the point of view of the environment, extractive operations raise two types of concern: the use of non-renewable sources may mean that these resources will not be available for future generations and extractive operations harm the environment (air, soil and water pollution, noise, destruction or disturbance of natural habitats, visual impact on the surrounding landscape, effects on groundwater levels). The waste produced by the extractive industry is a major problem. Mining waste is among the largest waste streams in the Community and some of that waste is dangerous. Abandoned mine sites and unrestored quarries spoil the landscape and can pose severe environmental threats due, for example, to acid mine drainage.

4.2.5 Environmental Impact Assessment and Strategic environmental assessment

An environmental impact assessment is obligatory for mining activities within all member states of the EU because this type of industrial activities influences the quality and quantity of the environment. The Directive on Environmental Impact Assessment (EIA) covers open pit mining and quarries, where the surface of the site exceeds 25 hectares. On European level the EIA procedure is regulated in the Directive 85/337/EEC, and in Poland in Articles 46-57 of EPLA, which is the main Polish act transposing the Directive. NGO Nemo has asked Magdalena Bar to write an overview of the Polish law concerning mining activities and with regard to the EIA she states that the following main elements of EIA procedure are relevant for this case:

- Consultations with environmental and public health authorities;
- Public participation;
- EIA report;
- Taking into consideration the results of consultations and the technical data gathered;
- Justification of the decision by giving the main reasons and considerations on which the decision is based , including information about the public participation process.

At this moment the province has to make a decision about the exploration stage of the mine. And according to Magdalena Bar no EIA is needed for these activities. When the mining company wants to explore the mine, an EIA-procedure is necessary (letter M. Bar, april 2005). However the EU directive on strategic environmental assessment ensures that the environmental implications of decisions are taken into account before decisions are made. Thus when the decision of the province about the research activities of the mine on the proposed area will have environmental consequences, an strategic environmental assessment (SEA) is obligatory. The purpose of the SEA-Directive is to ensure that environmental consequences of certain plans and programmes are identified and assessed during their preparation and before their adoption. The public and environmental authorities can give their opinion and all results are integrated and taken into account in

the course of the planning procedure. After the adoption of the plan or programme the public is informed about the decision and the way in which it was made. We will use the most relevant points out of the directive to show that a SEA is required in this specific case of the planned mining activities by the Pol-Skal company in Stara Kamienica, Poland. An SEI or EIA should be carried out before the research is allowed because the research is part of the plan of mining in that area and will have consequences for the environment, nature and landscape of the area involved.
The assessment has to be done for several reasons. At first the fifth Environment Action Programme: Towards sustainability – A European Community programme of policy and action in relation to the environment and sustainable development affirms the importance of assessing the likely environmental effects of plans and programmes. The Directive on strategic environmental assessment is of a procedural nature, and its requirements should either be integrated into existing procedures in Member States or incorporated in specifically established procedures. Secondly, where an assessment is required by this Directive, an environmental report should be prepared containing relevant information as set out in this Directive, identifying, describing and evaluating the likely significant environmental effects of implementing the plan or program, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme. The directive defines “plans and programmes" as follows: plans and programmes shall mean;

- which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and
- which are required by legislative, regulatory or administrative provisions;

Subject to paragraph 3 of the directive, an environmental assessment shall be carried out for all plans and programmes, which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development. The plans of the mining company are prepared for industry as well as country planning or land use.[xlix]

4.2.6 Waste

Waste resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries is covered by Directive 75/442/EEC on waste , as amended by Directive 91/156/EEC. The deposit of waste from the processing of minerals (tailings) in a pond is covered by Directive 99/31/EC on the landfill of waste , which lays down requirements concerning the authorization and construction of landfills, the types of waste acceptable at landfills and the monitoring procedures. Minerals processing is covered by the Directive concerning integrated pollution prevention and control (IPPC), which also lays down that pollution must be prevented or reduced through the use of best available techniques (BAT). The Community eco-management and audit scheme (EMAS) provides an instrument to integrate environmental concerns in the extractive industry. The reports required under this scheme provide a means for the industry to publicise its

environmental performance. The operations of the extractive industry will also be covered by the new Water Framework Directive. Priority issues for the integration of the environment into the extractive industry include prevention of mining accidents, improvement of the overall environmental performance of the industry and sound management of mining waste.
The White Paper on environmental liability reinforces the key principles of polluter-pays, prevention and precaution and others to be taken into account by the extractive industry. The communication stresses that the development of environmental performance indicators would make it possible to establish a detailed assessment of the industry's environmental performance. Resource use, discharges to air and water and land use are proposed as indicators. These indicators must provide for common measuring standards to allow for comparison of performance. This communication of the European Commission stresses the importance of finding an approach for the extractive industry which takes greater account of the environment and land use planning. This has lead to a directive on environmental liability which will be discussed in the next paragraph.
Extractive operations may help to arrest depopulation in certain areas. As those operations have a finite life however, it is necessary to consider how lasting economic effects can be created in those areas. The Commission is willing to facilitate a framework to intensify the dialogue between the Member States, both sides of industry, NGOs, the Commission and other stakeholders. It invites all these parties to make proposals on the objectives, constitution and format of such a framework. Until this moment the framework has not been completed yet.[1]

4.2.7 Environmental Liability

The principle according to which the polluter should pay when environmental damage occurs (the "polluter pays" principle) is set out in the Treaty establishing the European Community. This principle acts as a deterrent against the violation of environmental standards, and thereby contributes to realising the objectives and implementing EU policy in this area. Where there is an imminent threat of environmental damage, the competent authority designated by each Member State will require the operator (the potential polluter) to take the necessary preventive measures, or will take such measures itself and recover the costs incurred at a later date. Where environmental damage has occurred, the competent authority will require the operator concerned to take the necessary restorative measures (determined on the basis of the rules and principles set out in Annex II to this proposal).
In practical terms, when environmental damage occurs, Member States are required to ensure that the damage is remedied. This involves assessing the gravity and extent of the damage and determining the most appropriate restorative measures to be taken, in co-operation insofar as possible with the operator liable for the damage under the proposal - the operator of the activity having caused the damage. In our case this means that when the mine is going to operate in the area, they have to restore all landscape qualities that are destroyed. When the surface has to be excavated, it has to be replaced and restore the area to it’s original status when the mine is abandoned. This is called the “baseline

condition" of the area which means the condition of the natural resources and services that would have existed had the damage not occurred, estimated on the basis of historical data, reference data or control data. The environmental impact assessment could be a guideline to define this baseline condition and predict what is going to be destroyed and what it is going to cost to restore it.
This Directive should apply, as far as environmental damage is concerned, to occupational activities which present a risk for human health and the environment. Environmental "damage" means a measurable adverse change in a natural resource and/or measurable impairment of a natural resource service which may occur directly or indirectly and which is caused by any of the activities covered by this Directive[li].

4.3. EU framework Sustainable rural development

4.3.1 Introduction

The alternative for mining in this region is considered sustainable rural development. The Cork-declaration of 1996 marks the importance of sustainable rural development in Europe. The declaration calls for a rural development policy to support diversification of economic and social activity that focuses on providing the framework for self-sustaining private and community-based activities. Rural development must therefore be local and community-driven within a coherent EU framework. EU rural policy aims at reversing rural out-migration, combating poverty, stimulating employment and responding to growing requests for more quality, health, safety, personal development and leisure, and improving local well-being.
The preservation of the natural heritage, for example through implementation of EU nature conservation legislation such as the birds and habitats directives, will depend on at least the tacit support of local stakeholders. The sustainable development of rural areas is a central concern for the enlargement of the EU and will have far-reaching implications for the future of the continent as a whole. The last years the realisation in Europe has grown that a fundamentally different approach to rural development is required. An approach where the countryside is no longer seen narrowly as a factory for producing food but as providing a multitude of functions (including recreation, work and living places, aesthetic values and environmental services, including water management as well as ecological stability). More emphasis is put on endogenous approaches to develop existing local (human) resources in stead of resources from outside to stimulate and support development. In many cases, approaches emphasizing large scale initiatives, including industrialization, construction of amusement parks or motorways, are insensitive to the local context and risk doing as much harm as good. In fact, large scale projects designed and implemented without appropriate consultation and consideration of needs of the local population can overwhelm local communities by stifling initiative, disrupting the traditional economic and social relations, as well as eroding cultural and natural values. The mining initiatives in Stara Kamienica can be seen as an example of such an exogenous development that risks doing more harm than good for the local population. In promoting large scale exogenous development projects , policy makers in eastern and central Europe

often argue that there are no feasible alternatives. A host of exciting development initiatives across rural areas of Central and Eastern Europe show that this is not the case. They present not only a practical basis for further efforts but also promising models for addressing the deep-seated problems and achieving sustainable rural development.

4.3.2 Natura 2000

Due to Polish accession to the European Union, Poland is obliged to establish and protect territories included into the NATURA 2000 network. All EU member states share these legal obligations. The main aim of NATURA 2000 network is to protect areas in the European Union covering fragile and valuable natural habitats and species of particular importance for the conservation of biological diversity within the territory of EU. Member States have committed themselves to halting the loss of bio-diversity in the EU by 2010. As emphasized by the EU authorities, the biggest threat to bio-diversity is mankind. Through their activities, people contribute to the loss of habitats and species. In order to maintain bio-diversity in the EU, the Member States reinforce their national legislation and upgrade their nature conservation practices.
The so-called Birds Directive (1979) and Habitats Directive (1992) are two main EU directives related to nature protection. They constitute the legal basis for NATURA 2000. The areas established on the basis of Bird Directive are called Special Protection Areas (SPA). The list of bird species considered as endangered or rare at the European or global level is included in the annex to the bird directive. The areas established on the basis of Habitat Directive are called Special Areas of Conservation (SAC). These are the sites designated by the Member States where the necessary conservation measures are applied for the maintenance or restoration of the natural habitats and/or the populations of the species for which the site is designated (434 plant species and 200 animal species, excluding birds).
EU Directives list specific criteria to be fulfilled by any of the NATURA 2000 areas. However, the directives state what is to be protected without saying how it is to be done. The creation of the NATURA 2000 network is a very important and difficult task, based upon a dialogue between the Member States and the Candidate Countries and the European Commission. First, national lists of candidate NATURA 2000 areas must be prepared. National list of potential Sites of Community Interest (pSCIs) are submitted to the European Commission. Territories are selected according to a number of explicit criteria, including the conservation status of the site or the importance of the site at national level for the conservation of species and habitats mentioned by the Directive.
In the second stage, member states discuss the preliminary national list of candidate sites at bio-geographical seminars organized by the Nature Topic Centre of the European Environment Agency, in order to finally identify Sites of Community Interest (SCIs) to be included into the NATURA 2000 network. When a territory has been designated an SCI, the Member State is obliged to designate it a Special Area of Conservation (SAC) within the following six years. Once this designation has taken place, the member state assumes full responsibility for achieving compliance with the obligation to maintain a favourable conservation status for the species and habitats for which the sites have been designated.

Sometimes it will be enough not to drain a valley, not to fell a tree, not to turn pastures and meadows into building sites. In the majority of cases the protection will mean preserving a given area in its present state. In other cases a more varied and sustainable agriculture will solve the nature conservation problem, in others – restricting the process of industrialization will be a solution.
In principle, the Directives allow any activity in the NATURA 2000 territories which does no harm to the specific values of nature covered by the Directives. Sometimes all practical activities carried out in a protected territory may continue without any further restrictions. If any of the Member States does not fulfil its duties as far as conservation of NATURA 2000 areas is concerned, the EU Commission shall take legal action against it (source: portal site European Union). In the province Lower Silesia different sites are designated to the natura 2000 list but in the district where Nemo is active (Jelenia Gora), only the national park Karkonosze is a SCI area. Thus the area bought by the mining company to extract minerals is not part of the natura 2000 list with designated areas (www.natura2000.mos.gov.pl).

4.3.3 Funding of Rural Development within the EU

The European Union has a lot of opportunities for the funding of projects. In the report of Hanneke Lankveld an overview has been given of EU programs that could be interesting for Nemo. But although there are a lot of opportunities, it is not easy for a small NGO to apply for these subsidies. Most structural funds run till 2006 and Nemo can try to apply for the funds that will be in function from 2007. Nemo can not individually apply to the structural funds because they do not finance separate individual projects but multi – annual regional development programmes drawn up together by the regions, the Member States and the Commission.
The Polish Rural Forum (Forum for the Animation of Rural Areas - FAOW)[6] is the first national platform of cooperation of rural organizations in Poland. The organizations cooperating within the Forum work together towards a more effective functioning of Polish rural communities within the European Union, through animation and increased participation in decision making.

The aims of the Polish Rural Forum are as follows:

- to work for the development of rural areas and their inhabitants;
- to support and promote sustainable rural development;
- to support civic society development and knowledge-based economy,
- to build partnership and dialogue for sustainable rural development, and

[6] The Polish Rural Forum
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Poland
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e-mail: faow-sekretariat@cofund.org.pl

- to animate local communities in rural areas.

The Forum was created as an informal platform in 2002. The initiative was taken by twelve rural organizations, active at the national as well as local level. In December 2005 the Polish Rural Forum has become a legal person, and from that moment it functions as a „union of associations".
One of the Forum's objectives is to promote the LEADER-type approach in Poland – an approach that has proved effective in the animation of rural areas in the European Union.
LEADER is an EU program to support those rural communities which wish to cooperate and build partnership. The LEADER program supports communities in improving the quality of life and economic situation of their „native land", through joint effort and broad cooperation. LEADER was initiated in 1991, and at present (2000-2006) it is in its third programming period – "LEADER +". After 2007 a considerable proportion of EU rural development funding will be allocated in accordance with the LEADER approach[lii].
The Polish Rural Forum from the moment of its creation cooperates closely with PREPARE and is its Polish partner.
PREPARE (Pre-accession Partnership for Rural Europe) is a pan-European network aiming to support civic society development in rural areas, especially in Central and Eastern Europe. PREPARE is also a program which promotes international cooperation and exchange in rural development. PREPARE's activities focus on the cooperation between national rural networks within the wider European perspective. Since its creation, the Forum made efforts to apply in Poland programmes based on the principles of the Community Initiative LEADER. FAOW is actively involved in promoting the measure "LEADER+ Pilot Programme" within the Sectoral Operational Programme "Restructuring and Modernization of the Food Sector and the Development of Rural Areas". These activities aim at facilitating the adjustment of local partnerships to prepare for both "LEADER+ Pilot Programme" in Poland in the years 2004-2006 and for similar activities in the next programming period (2007-2013).
All rural areas of the European Union can benefit from the Community Initiative LEADER+. Aid beneficiaries include mainly Local Action Groups, i.e. voluntary coalitions of organizations covering three sectors (public sector institutions, private business and NGOs), with clear organizational structures, with short- and long-term projects which display an integrated approach to the development of rural sub-regions with no more than 100,000 inhabitants[liii].

4.4. NEMO in Europe: conclusion

This chapter was meant to give Nemo a guideline of the points of view of the European Union on mining and rural development so that they can use these insights in their lobby against the mining plans of Pol-Skal in the village of Stara Kamienica and for promoting their own plans for sustainable tourism in the same region. In this paragraph the conclusions of this chapter are presented together with recommendations for Nemo.

Even small local action groups can use the European union as a way of lobbying for their cause. They can approach members of the European parliament to ask questions to the European commission. It is also possible to file a complaint to the European Commission directly. But when an NGO files a complaint, they have to prove their statements with objective scientific research. Thus when Nemo wants to use these lobby opportunities, they have to present scientific research to convince the Commission that the EU that legislation is violated. A biologist for example can provide data about the environmental effects of mining in order to look if the birds and habitats directive is violated.
The European Union has the opinion that environmental protection and sustainable mining can go hand in hand. Economic development of rural regions is important but this should not harm environment and nature in the area. There are several directives and law to support this opinion. There are the nature laws in the birds and habitat-directive which state that when a peace of nature is lost, this has to be compensated by the party responsible for the loss. Next to this there are the mining-related regulations like the directive on the Environmental impact assessment and the strategic environmental assessment. These regulations have to make sure that the environment is taken into strong consideration when a decision is taken about the operations of a mine. When the research of the mining company is going to influence the environment, an impact assessment is obligatory. The EU-commission has to make sure that community rules are respected. These rules include requirements on EIA. The mining company needs a plan of how they are going to operate the mine and they have to take into consideration how they are going to deal with waste and the recovery of the mining site. The Polluter pays principle is laid down in the directive about environmental liability. When the mine gets the concessions to do research and operate in the area, they have to restore the damage done to the landscape. Therefore they need to reserve money in their budget. Polish employees of Nemo could try to find out if there is budget available in the financial proposal of Pol-Skal for environmental compensation.
To present the sustainable rural development as an alternative for mining, Nemo has to make use of the possibilities there are in Europe for the funding of projects. When money can be generated to invest in the community of Stara Kamienica, the local authorities can more easily be convinced to choose for rural development in stead of mining. Most funding programmes demand cooperation with other local organizations. An interesting platform for NGO's is provided by the Polish Rural Forum. Their objectives about rural development and sustainable tourism go hand in hand with Nemo's experience and projects. By connecting to existing organizations, Nemo can try to get European money for the development of the region. This gives more weight to the arguments to stop the mining plans. So two there are at least two important reasons for close cooperation with Polish NGO's: funding from Europe and lobbying via Polish European senators. Nemo needs to think about how to professionalize the organization in order to cooperate with other organizations.

5. Conclusions and recommendations

5.1 Research Conclusion

Since the Polish company Pol-Skal has bought land in the village of Stara Kamienica in 2003 with the intention of starting an open pit mine for the extraction of the industrial mineral feldspar, NGO Nemo (the commissioner of this research report) felt they were faced with the threat that there could be no future for their tourist compound and regional sustainable development plans in the region. Nemo has been promoting sustainable tourism and development in the region for eight years now and at this moment the provincial authority has to make a decision about the possible allowance of the mining activities in Stara Kamienica.
As an independent research team we could not make statements about what is favourable development for Stara Kamienica. The democratically chosen institutions with the authority of deciding about the future of the region, with or without mine, should consider this report in weighting their decisions. Nevertheless the main objective of this research has been to help Nemo in its resistance against the mining-plans and to put its plans for rural development on the political agenda in the region. We did this by providing an insight in on the one hand the mining industry and the social and environmental effects and on the other in relevant European environmental legislation and rural development funds.

We have identified the following main objectives:

- To analyse the environmental, economic, and socio-cultural impact of the mining industry, particularly in this region
- To analyse relevant European legislation and funding possibilities for rural development
- To provide Nemo with the necessary knowledge and information to organize its lobby for its rural development plans in the region.

Economically mining can be of some importance to the region, not for employment but for tax income. Most people who will find a job in the mine are technical experts and the uneducated (considering mining expertise) local people will not benefit. The mine will operate for about 15 years so the employment is not of a sustainable nature. The municipality can benefit from the mine by raising taxes but the benefit for local people will depend on how much this income will be and how it will be used. The community should make appointments with the mining company and the local government to ensure that local interest will be respected if the mine is going to be in operation. The economic effects of the mine depend also on the profitability of mining feldspar. The mining industry in general is growing, but the market for feldspar is more or less stable (steady rise of demand as well as supply). For Poland it depends if Pol-Skal is going to produce for the domestic or for the foreign market and for who they are going to produce the side

product granite. Feldspar can also be imported from other countries, e.g. Czech Republic so the need to mine the mineral especially in Stara Kamienica is limited. If the mining activities are going to be allowed, it should be within strict boundaries. The provincial government should have a good look at the business plan of Pol-Skal to see how likely it is that this mine will be profitable. This look at the business plan is also important to guarantee the environmental sustainability of the mining operations. Because of the European Framework on Environmental liability the mine needs to restore the landscape they are going to devastate by the extractions. This means that money needs to be reserved for restoring the site when the mining site is abandoned. Next to landscape destruction there are going to be other environmental effects of mining, like dust pollution, noise pollution, lower level of ground water and decreasing biodiversity. Independent EIA should be done to find out until what extent these will play a role in this case. (both for extraction and processing). We were lacking the technical data about for example groundwater levels, the depth of the mine pit, the different species that live there etc., necessary to give an overview of the specific local effects of this mine. The birds and habitats Directive states that every loss of biodiversity should be compensated. To decide the baseline situation, the EIA is an important instrument. If the EIA is not done considering the EU guidelines, every actor involved in this region can file a complaint at the European Commission. But preventing is better then curing and therefore sound agreements should be made about environmental protection during operation and after closure. The extent of reclamation will depend on the regulations of the regional government. This should be clear before the mine starts operating. Based on Environmental Impact Assessment, Social Impact Assessment, the business plan of the company, and agreements about reclamation and investment of taxes in the local economy, the province should make a decision whether or not to develop mining activities in this region. Obviously the viability of other options such as tourism and rural development should be taken into account. It should be considered till what extent different possibilities for development are in conflict with each other.

Although a lot of progression has been made towards further democratisation of the local and regional governance in Poland, there is still much work to do in that respect. Participation of non governmental actors and citizens is far from natural. A reason for this could be the absence of a culture of political participation in Poland under Communism. On local level, organizations and governments should stimulate the development of civil society. Nemo could contribute to strengthen their relations with local action groups, environmental NGO's and nature organizations. When Nemo works together with local organizations, they could apply for European funding and provide a financial input to their alternative development plans. Capital is needed to put the alternative for mining, rural development, firmly on the local political agenda. To present the sustainable rural development as an alternative for mining. When money can be generated from the European Union to invest in the community of Stara Kamienica, the local authorities can more easily be convinced to choose for rural development in stead of mining. Another reason to work together with other organizations is because of the lobby advantages within the European institutions. It is better for a Polish NGO to lobby for Polish problems than it is for foreign organizations. Polish members of the European Parliament

are a good way of getting attention for the threats the mine is forming for the region. Local and regional political arena's are often used to promote political interest and sometimes serve as political platforms for national parties. Forwarding and promoting plans for development cannot be done without support of local and regional politicians and the local population. Nemo thus has to be aware of the political dynamics in the region and try to form useful coalitions with relevant actors and stakeholders. An interesting platform for NGO's is provided by the Polish Rural Forum. Their objectives about rural development and sustainable tourism go hand in hand with Nemo's experience and projects.
Nemo could use the theory about stakeholder analysis provided in this research report. Because a stakeholder analysis, among other things, provides insight in the social dynamics around a specific issue, the groups involved, power struggles between those groups and their differing viewpoints, and may provide a starting point for the determination of (lobby) strategies and the pursuit of specific strategic options, Nemo could use these insights in their negotiation with the mining company and the Polish authorities. An accurate stakeholder analysis can help Nemo to increase its understanding of the socio-political dynamics around the mining-issue in Stara Kamienica. Also in this case you have to know your enemy and friends before you can fight the battle. By visualizing possible partners and relevant stakeholders and by analyzing them and their positions and possibilities Nemo can look for suitable partners to form a coalitions for its lobby. The amc-team tried to present a framework to conduct such an analysis as the team was not in the position to conduct such an analysis itself.

5.2 Recommendations

The following recommendations to Nemo can be derived from the conclusion:

- Nemo should do, or ask a social researcher to do, a Stakeholder analysis (using the guidelines of this report to secure the scientific value of such an analysis);

- Get contact with other organizations in the region to share in relevant EU funding and secure the financial basis for alternative development in the region. At the moment Nemo is lacking the organizational and professional resources needed for applying for EU funding and sustainable relations and projects executed with other organizations could compensate this;

- Professionalize as an organization to form stronger coalitions with local, regional as well as national organizations. Nemo could think of making a business or policy plan in which their organizational goals and future plans are laid down. Other organizations could see in such a document if cooperation is a fruitful option.

- When the operation of the mine is inevitable, try to negotiate with the company to secure local as well as Nemo's interests. An instrument can be the social, economic and environmental impact assessment of the mining plans;

- Get in contact with Polish members of the EU parliament. It is better to do this with a coalition of Polish NGO's that oppose the mining plans as well;

- Make sure that the EIA procedure is followed according the rules and file a complaint with the EU commission if not. To file a complaint you need research to support the claim.

- Ask for the business plans of Pol-Skal because they should be public and make sure that the authorities take the principle of environmental liability into consideration. The company is obliged to pay for the restoration of the damage done to the landscape. If EU directives are violated, file a complaint with the EU commission or lobby with the members of parliament.

- Nemo should lobby for a contract or an other kind of agreement with the authorities, the local people and Pol-Skal to make sure that local interests are respected and that all damage done by the company is compensated.

- To approach the commission or parliament, make sure that there is sound scientific research done to support the claims made.

It is up to Nemo to use these recommendations in the way they think is useful for reaching the objectives of their organization.

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Appendix

Appendix 1: Stakeholder Analysis

Venn diagram:

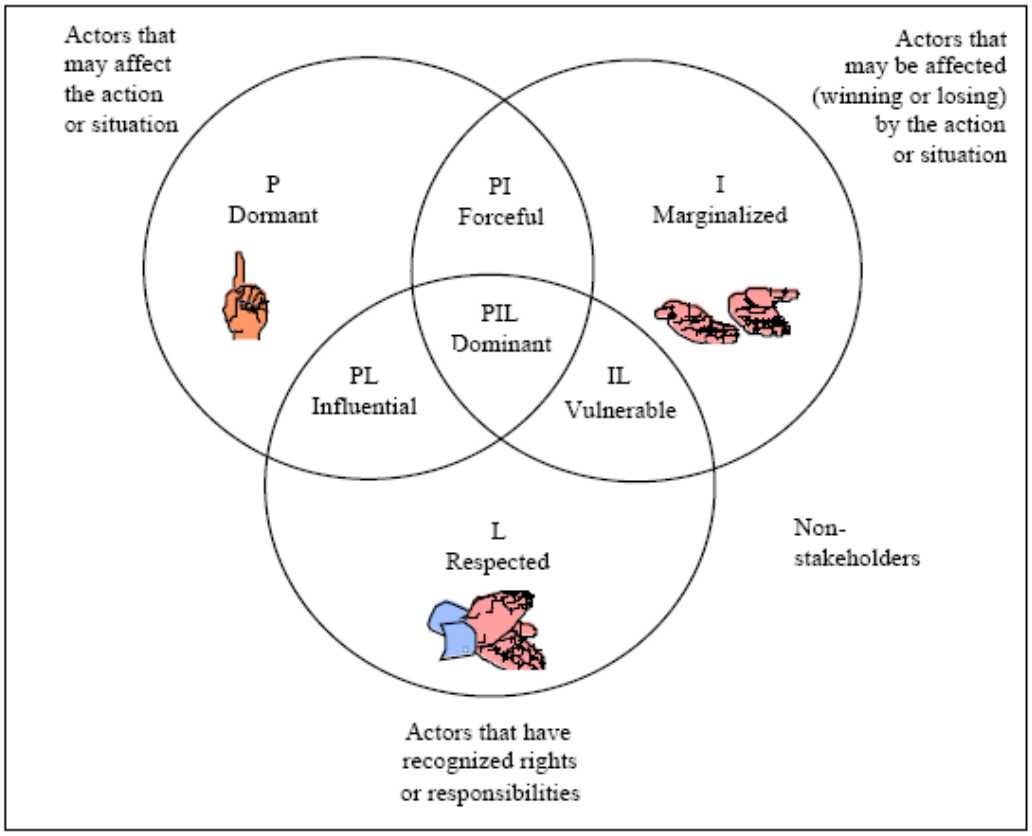

TABLE 1.
Possible Categories of Stakeholders

Category of Stakeholder	Local (City) Level	Regional or National Level	International Level
City Council (political authority)	XXXX		
Mayor and/or Chief Executive office of the city government	XXXX		
City government administrative (sectoral) departments and sub-divisions	XXXX		
Municipal companies, autonomous organisations, para-statal bodies	XXXX		
Public regulatory bodies	XXXX	XXXX	
Regional/Provincial government - administrative (sectoral) departments		XXXX	
Regional/Provincial government - executive agencies or special bodies		XXXX	
National (central) government administrative (sectoral) departments		XXXX	
Academic and research institutions	XXXX	xxxx	
Private sector organisations (Chambers of Commerce, Trade Associations, etc)	XXXX	xxxx	
Industrial or commercial companies with major impact on / interest in the issue	XXXX		
"Informal" Sector groupings and organisations	XXXX		
Community-Based Organisations (CBOs)	XXXX		
Non-Government Organisations (NGOs)	XXXX	xxxx	xxxx
Women's Groups, Youth Groups	XXXX		
Religious organisations, other charitable foundations	XXXX	xxxx	
Media (Press, Radio, Television)	XXXX	xxxx	
International development support programmes and projects			XXXX

Note: capital XXXX indicates likely major role and lower-case (xxxx) indicates likely role of less importance, depending upon local circumstances.

Box 3: Variables affecting stakeholders' relative power and influence	
Within and between formal organisations	**For informal interest groups and primary stakeholders**
Legal hierarchy (command and control, budget holders)	Social, economic and political status
Authority of leadership (formal and informal, charisma, political, familial or cadre connections)	Degree of organisation, consensus and leadership in the group
Control of strategic resources for the project (eg. suppliers of hardware or other inputs)	Degree of control of strategic resources significant for the project
Possession of specialist knowledge (eg. engineering staff)	Informal influence through links with other stakeholders
Negotiating position (strength in relation to other stakeholders in the project)	Degree of dependence on other stakeholders Assessing importance to project success

(http://www.euforic.org/gb/stake1.htm)

Appendix 2: Contact with experts

A: Interview mining

1. Environmental consequences

- What can be environmental consequences of open-pit mining, considering…
    - Extensive use of water
    - Cut through ground water
    - Use of chemicals?
    - Pollution of water?
    - Landscape destruction
    - Welk afval ontstaat er?
    - Wat gebeurt er met de grond die gedolven wordt?
    - Other?

- During the last years the mining industry has promoted itself as taking care of the environment, and ensuring sustainability. Is there really a difference in mining techniques? Is mining nowadays more environmental friendly? What are the differences/new options?

2. Closure

- How many years could this type of mine operate?
- What are the options after operating? Are there ways to bring the landscape in its original state? What are the options of land-use after closure?

3. Feldspar

- What is exactly the difference between feldspar, granite, leucite?
- What is it being used for? (glass, ceramics, other?) Are there any substitutes?
- Where else can it be found?
- Are there any specific features of feldspar mining? (special technique that is used?)
- How profitable could it be? Over how many years?
- How is the market for (this type of) minerals evolving?

4. Financing

Could you give some indication of investments and profits before and during the mining operation?

- How much are the initial investments?
- How much could profits be?
- Is there a high risk involved? (of fluctuating prices, less stock, etc)
- What are the costs of closing?
- Is mining usually dependent on external investment?
- Could this type of mining offer employment to local people?
- What about mining and corruption?

B: Interview Alexander de Roo

Oud-Europarlementariër Groen Links (1999-2004)

Oosterbeek 16/6/2006

Uitleg AMC:

Wij zijn bezig met een onderzoek voor de stichting Nemo waarin een onderdeel is het inventariseren van de Europese wet- en regelgeving op het gebied van mijnbouw en duurzame rurale ontwikkeling. Nemo wil deze kennis uiteindelijk inzetten bij hun lobby tegen de komst van de mijn.

Klopt het dat u van 1999 tot en met 2004 als vertegenwoordiger van Groen Links in het Europese Parlement heeft gezeten?

EU-PARLEMENTARIËR

1. Wat hield uw werk als EU-parlementariër precies in?
2. Hoe bent u als Europarlementariër in contact gekomen met de stichting Nemo?
3. Waarom sprak de problematiek van de stichting Nemo u destijds aan?
4. Waarom besloot u vragen te stellen aan de Europese Commissie over de komst van een open leuciet-graniet mijn in Stara Kamienica?
5. Heeft u nog contacten met de stichting Nemo of heeft u zich na de briefwisseling nog ingezet voor de mijnbouwproblematiek in Polen?

LOBBY IN DE EU

6. In hoeverre zijn Europarlementariërs in staat te lobbyen voor belangen van NGO's?
7. Welke mogelijkheden had u als Europarlementariër om iets onder de aandacht te brengen van andere Europese instituties?

8. Welke instituties zijn binnen Europa het meest relevant voor de stichting Nemo in hun strijd tegen de komst van de mijn?
9. Wat is de meest succesvolle ingang voor lokale organisaties om hun zaak op Europees niveau te bepleiten?
10. Aan welke kenmerken moet een NGO volgens u voldoen om via de Europese weg te lobbyen voor lokale problemen in lidstaten?
11. Kent u voorbeelden van organisaties die het gelukt is om net als Nemo geprobeerd heeft via lobbyen in de EU steun voor hun zaak te krijgen?
12. Waar kan het volgens u aan liggen of een lobby lukt of mislukt?

LOKAAL VS. EUROPA

13. Welke mogelijkheden zijn er binnen Europa om de komst van een mijn tegen te houden?
14. In hoeverre is de Europese commissie bereid zich in te zetten voor lokale problematiek?
15. In hoeverre weegt het milieu- en natuurbelang binnen de Europese gemeenschap op tegen het economische belang dat de komst van een mijn met zich meebrengt?
16. Het antwoord op uw vragen aan de commissie luidde onder andere dat de commissie van mening is dat mijnbouw niet onverenigbaar is met bescherming van natuur en milieu. Bent u het hiermee eens of kent u voorbeelden die dit bevestigen of ontkennen?
17. Denkt u dat de richtlijnen (management of waste, environmental impact assesment) van de EU die ervoor moeten zorgen dat het milieubelang gewaarborgd blijft voldoende zijn om geen blijvende schade aan te richten in het landschap door mijnbouw?

C: Interview Peter Spruit – Nemo

1. Wanneer besloot Nemo om bij de EU steun te zoeken voor het protest tegen de komst van de mijn?
2. Waarom denkt u dat de EU een strategische partner voor Nemo zou kunnen zijn?
3. Welke contacten heeft u gelegd bij de EU?
4. Hoe bent u in contact gekomen met Alexander de Roo van Groen Links?
5. Waarom besloot dhr, De Roo zich in te zetten voor Nemo op Europees niveau?
6. Welke ervaringen heeft u met contact met de EU?
7. In haar afstudeeronderzoek heeft Hanneke Lankveld een aantal aanbevelingen gedaan om Nemo in contact te brengen met Europese financiering. Heeft Nemo iets gedaan met de informatie uit haar rapport of haar aanbevelingen? Wat? Waarom?/ waarom niet?
8. Van welke programma's en regelgeving bent u momenteel al op de hoogte?
9. Is Nemo eerder in aanraking geweest met EU subsidie voor haar projecten?
10. Welke voor- en nadelen zie je voor Nemo bij het aanvragen van EU-subsidies?
11. Wat moet er binnen de organisatie van Nemo gebeuren om zich als Europese actor neer te zetten?
12. Hoe duidelijk is de organisatiestructuur van Nemoland Polen en waar blijkt dit uit?
13. Heeft Nemo in Polen contacten met de publieke en private instituties over eventuele samenwerking?
14. Welke netwerk mogelijkheden heeft NEMO binnen Polen en de EU?
15. Is er bij Nemo iemand werkzaam die alle contacten onderhoud en gaat lobbyen voor de zaak van Nemo in bv Brussel?

D:Questions municipality Stara Kamienica

Szanowni państwo,

Jesteśmy grupą studentów z Wageningen University w Holandii. Prowadzimy badania naukowe oparte na górnictwie w Starej Kamienicy. Badania te są częścią projektu, który wykonujemy w trakcie naszych studiów. Wiemy, że „Nemo the NGO" prowadzi tam działalność, a także skontaktowaliśmy się z „Polskal". Do przeprowadzenia tych badań za niezbędne uważamy zadanie kilku pytań władzom miasta, aby uzyskać cenne dla nas informacje.

Oto następujące pytania:

1- Wiemy, że władze miasta jako pierwsze odmówiły wydania pozwoleń na działalność górniczą w Starej Kamienicy, dlaczego tak postąpiły?

2- Co władze miasta sądzą o wpływie górnictwa na Starą Kamienicę?

3- Czy miejsce gdzie „Polskal" zamierza prowadzić działalność górniczą jest częścią terenu chronionego programem „Natura 2000 Network"? Czy to miejsce jest częścią jakiegoś chronionego rezerwatu przyrody, czy Polska uwzględniła to miejsce w planach jako teren chroniony?

4- Jaka jest aktualna sytuacja, jeśli chodzi o wodę (wodę pitną, gruntową oraz do nawadniania) w Starej Kamienicy? Czy uważają państwo, iż górnictwo wywiera istotny wpływ na obecne zarządzanie gospodarką wodną?

5- Jeśli „Polskal" rozpocznie działalność wydobywczą na tym terenie jak wielkich przychodów może spodziewać się miasto/ rząd z tytułu podatków oraz innych dochodów?

Dziękujemy za współpracę.

Z poważaniem:

Mokit, Fatihiya, Janneka

E: Questions directive Pol-Skal

Sehr geehrter Herr,

Ich habe ihre Kontaktadresse von Peter Sprujt von der Nemo foundation in Amsterdam bekommen. Mit ihm waren Sie in Konktakt wegen der Plaene zum Bergbau von Pol-Skal in der Nähe des Dorfes Stara Kamienica in Südschlesien.
Ich bin eine holländische Studentin und studiere internationale Entwicklungsstudien an der Universität in Wageningen. Gemeinsam mit 4 anderen StudentInnen kurz vor Studienabschluss, arbeite ich an einem Projekt für Nemo.
Nemo hat uns damit beauftragt, eine unabhaengigen Rat abzugeben, ueber die Moelichkeiten fuer die Region, in der sie arbeiten. Das Hauptthema unserer Untersuchung ist es, Politik-Macher ueber die Vor- und Nachteile verschiedener Entwicklungsmoeglichkeiten fuer der Regiozu beraten. Dabei beziehen wir auch Oeko-Tourismus und Bergbau mit ein. Obwohl Nemo unser Auftraggeber ist und dieser auch seine Interessen hat, will ich betonen, dass wir uns den wissenschaftlichen Freiraum nehmen, die Situation von allen Seiten zu betrachten und einen wirklich unabhaengigen Rat zu geben.
Deshalb ist jede Information von ihrer Seite fuer uns sehr hilfreich.
Wegen der sehr beschaenkten Zeit und des geringen Budgets koennen wir leider nicht nach Polen kommen. Wir wuerden es sehr schaetzen, wenn Sie uns Infomationen per E-Mail zukommen lassen koennten. Hier sind unsere wichtigsten Fragen:

1. Welche Art von Bergbau planen Sie in der Region? Welche Mineralien sollen geborgen werden und wofuer sollen diese weiterhin verwendet werden?
2. Welchen Vorteil koennte diese Art von Berbau den Menschen vor Ort bringen. Koennen sie ungefaehr die Hoehe der Steuern beziffern, die zu erwarten sind und gibt es weitere Vorteile, die die Einheimischen haben werden. Wird eine Sozialvertraeglichkeitsstudie stattfinden, bevor die Arbeit an der Miene beginnt?
3. Wurde eine Umweltvertraeglichkeitsstudie durchgefuehrt? Gibt es irgendwelche Informationen ueber die moeglichen Auswirkungen auf die Oekologie, das Grundwasser und ueber Luftverschmutzung und Laermbelaestigung?
4. Fuer wie lange koennte diese Miene arbeiten und welche Moelichkeiten gibt es, das Gelaende nach der Schliessung zu nutzen? Besteht die Moeglichkeit, die Landschaft in ihren frueheren zustand zurueck zu versetzten? Gibt es einen Plan fuer die Zeit danach?

Es waere sehr hilfreich fuer unsere Arbet, wenn Sie uns diese Fragen beantworten koennten. Selbstverstaendlich werden wir Ihnen ein Exemplar unseres Abschlussberichtes zukommen lassen. Im Voraus vielen Dank.
Mit freundlichen Gruessen
Janneke Barten
Heerenstraat 3
Wageningen
00 31 317 420099
Bitte richten sie ihre Antwort an: Janneke.Barten@wur.nl

Notes

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