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Social license to operate perspective

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1. Introduction

Mining is one of the most important industrial sectors in Australia. Mineral Council of Australia reports (2013) that mining and mining-related sectors make up around 20% of the economy. Furthermore the mining services' sector is expected to grow rapidly at 15 to 20% a year. According to Mudd (2010) fundamental mega-trends in Australian mining sector are production, ore grades, wastes and resources. For almost all mineral in Australia, production continues to grow over time, e.g iron ore or manganese where the growth was accelerated due to economic growth in China and Asia. Mining technique in principal has changed from underground to open pit mines, especially with black coal, nickel and gold. Amount of waste rock has increased and this has raised discussion. One of the key questions have also been, what are the future conditions, are mineral resources considered 'economic and what are associated social and environmental costs.

Also Finnish mining industry sector has faced a tremendous growth in recent years. Between 2005 and 2010 the volume of metallic ore and waste rock mining in Finland increased from fewer than 5 million tons to 46 million tons (Kröger 2015). At the same time environmental and social impacts of the mining industry have been raised into societal discussion. Based on the research Finnish people seem to accept mining industry (Jartti et al. 2014). However, one case is above the rest causing societal conflicts and environmental problems, namely Talvivaara nickel mine in Kainuu Finland (Tiainen et al. 2014). Talvivaara mine's environmental and social conflict has been considered a significant event for the whole Finnish mining sector; shaping the development of the sector (Kohl et al. 2013)

In this study we try to find out how is the societal acceptance of a mining industry seen from broader view and what kinds of tools there are to perform the social licence to operate. Aim is to learn about best practices in Australia and discuss about their potential in the Finnish context.

The study was a part of Finnish SAM – Sustainable and acceptable mining industry –research project that was part of the national Green mining programme funded by TEKES. Sustainable Acceptable Mining (SAM) provides new tools for environmental and social management in mines and for operator-authority-public communication in mining regions. SAM is a co-operation project where the main partners are VTT Technical Research Centre of Finland, Geological Survey of

Finland (GTK), the Finnish Environment Institute (SYKE) and the University of Helsinki (Environmental Economy). In addition, SAM has several case studies with the industrial partners that represent the mining value chain. The aim of this project is to create tools to increase the imperceptibility of mining especially in Finland but also globally in order to achieve socially, economically and environmentally sound and acceptable mining environment. The main focus is on metal mines but the developed tools and indicators will be applied in other mining areas as well.

SAM is an international networking project that will enhance knowledge transfer with Latin America and Australia. SAM consists of five Work Packages (Screening future sustainable mining economy, Sustainable business concepts, Water efficiency and risk assessment and Social acceptance) completed with Work package that is responsible of the overall synthesis and means of communication. The benefit of the project in general level is to create a holistic view of sustainability related to the mining industry and to apply tools to improve social acceptance towards minerals use on regional level. Sustainable mining technologies and environmental hotspots have been identified along the value chain in different industrial case studies.

2. Materials and methods

Cooperation with CSIRO Australia was an important part of SAM's international cooperation and it was carried out during 2014 as research exchange in CSIRO, Clayton. Aim of the cooperation was to learn about the Best Practices in sustainable development in Australian mining and minerals sector. Work was carried out in the first place by making the interviews among 22 long term experienced mining sector professionals. These experienced persons were researchers in universities and research institutes (14), industrial managers and industrial associations (5), consultants and administration people responsible for mining issues (4). The purpose of the interviews was to form conception about the best practices in Australia's mining sector through examples given by interviewed people. The topics of the interviews can be divided as follows:

- Identify and give examples of Best Practices related to social acceptability, people and environment, taking account the future aspects of mining industry
- What kind of dialog has been carried out between different stakeholders concerning the acceptability of the mining
- How the life cycle of the mine, including activities and services after closing has been taken into account
- What are the communication ways usually used
- How do you see the role of authorities and governance
- How do you see the role of continuous learning process
- What is the company culture in Australian mining industry in long term (-> 2050) to create shared value

Interviews were carried out during the autumn 2014 by Senior Researcher Minna Nors from VTT Technical Research Centre of Finland.. The interviews were based on the questions described above and the questions and information of the purpose of the study were sent beforehand to the interviewed persons. The interviews were recorded and they were either face to face or telephone discussions. Literature search was based on the interviews and it was carried out during autumn 2014/spring 2015. Interviews were transcribed during spring 2015 at VTT and the transcriptions were read by VTT senior researchers Helena Wessman-Jääskeläinen and Nina Wessberg. Furthermore the report was sent to CSIRO for comments as agreed.

3. Results

The results were structured under the six vision paths outlined in the earlier SAM results concerning the Vision and Roadmap of the Finnish mining sector (see Kohl et al. 2013). The vision paths help us to structure the observations in a way that they will benefit the future development of the Finnish mining sector. These vision paths were:

1. Developing the activities of the authorities
2. Developing company culture
3. Life-cycle thinking
4. Customised and well-timed communication
5. Mine accepted by the society and by the community
6. Learning and creative mining industry

3.1 Developing the activities of the authorities

> *"That's what government should be doing and they're not, they're just letting any mine through, they've rarely ever said no to a mine, and so really government should be setting the limit to the amount of land we can use for mining, what is the limit to the amount of water they can use, and what are the conditions under which they have access to that water. Government should really be taking a much stronger role in all of that and they're just not." (Interview 19-20)*

> *"…because you've got a lot of that, conflict going, where government, is seen to be too close to the industry." (Interview 21)*

A question of the impartiality of the authorities is raised in the interviews. It seems that the concern is that the authority is too much in the mining company's side. According to the interviews, the authorities should take more responsibility for the knowledge use in mining building and operating processes; the authority is expected to be much stronger authority as it has since been.

> *"Leading Practice is going beyond, minimum regulatory requirements of course. That's just the bottom rung of the ladder, the way we see it. But, faith in the safeguard provided by*

government is absolutely critical. And the impression certainly we've had in recent years is that faith isn't as strong as it used to be. That's the place the government really can play. Secondly, I think government can play a very important role in understanding cumulative impacts. Cumulative impacts on social impacts, environmental impacts." (Interview 17)

Although there are doubts about the impartiality of the authorities, they are still comprised an authority who has power, and who has an ability to fix standards. However, the role of authorities and governance was seen complex because there is governance level, state level and local level that have different policies. Each state manages their own minerals development policy and it is not the same in every state. In addition, the government regulates the industry. The government has an important role as they set 'a minimum' for the mining activities. Government role was also seen as gathering all environmental and social information together for the local use.

"And one of the things that we found, certainly in the Australian, citizens, people had very low trust in government. And for mining and, so it might be the case that there needs to be some, dialogue in that , I mean I dunno if you can make people trust their government more. But it's interesting I think to explore that question and find out why, the trust because somehow the finding that trust in government is lower, than the industry, and that's quite interesting." (Interview 7)

3.2 Developing company culture

"Biggest barriers is industry culture, I think, alright.. And by that I mean the fact that they're not willing to be as transparent as they need to be.. they're, too reliant on government to make sure they get all the approvals through without actually engaging with communities properly, and so on so I think that's probably one of the biggest barriers." (Interview 19-20)

Well I think our company, definitely understands the importance of these issues to a long term success so we've been around for a very long time, 150 years, we're not.. not the sort of company that's just in it, to make money the next 10 years and then disappear off the face of the Earth, so we see ourselves being around for a very long time and, really committed to establishing, the track record and the reputation to help us be successful over that timeframe and we see these sustainability issues as being critical to that. So, I think they have a very high priority and we have, a charter and our first value is

sustainability, and we don't wanna do anything that compromises that, because we know, from experience that.. if you make a mess in a local community, the project gets shut down, liabilities and we just don't wanna be there, so it's really quite a, clear strategy for us. (Interview 16)

The core question in sustainable industry is how the company integrates sustainability issues into the company strategies; the strategy should be based on sustainability targets. The ways how the company communicates and treats their stakeholders reflects the company culture. If the company sees itself as a part of society and as a part of the societal system, which creates welfare to the human world, the communication processes where stakeholders are respected are possible and potential.

According to the interviews the importance of the sustainability in decision and operations is understood in the companies but from the three sustainability pillars (the economic, socio-cultural, and environmental) the economy is highlighted the most valuable. Although understanding that sustainability is important it is not really integrated into the strategies of the companies; hence, the company culture is just handling the sustainability issues but not considering them as part of serious future business planning.

"I think people.. in sustainable development areas or whatever can be quite isolated doing that thing but they're not necessarily part of the business planning and whatever so that I talked about where they were part of that, but it's complicated, it will be complicated." (Interview 18)

The operating environment of the company, the markets and the society, is all the time changing. Many barriers could be avoided if the company understands that it should continuously scan the expectations of the society.

"we try and identify, what the concerns and needs of the community are and then we build community development plans, to voluntarily contribute to addressing those issues. So obviously we can't solve all problems everywhere we operate but we can help and that's what we really want to do. …Yeah, that's sort of at the local level and then at the global level we have what we call forum on corporate responsibility and that's international advisory group for our CEO and his direct reports. So, it's the leadership of a range of non-governmental organizations and they help us, understand, the global trends, issues, expectations, and then advise us, on site specific or international policy issues depending on what the issue is. So it's quite a powerful group at the global level.…It's called the forum on corporate responsibility …. And so it's a very effective way of,

helping our senior management understand, the expectations of civil society." (Interview 16)

One perspective in creating the company culture is also the size of the company. It was made clear in the interviews that junior companies are not considered as sustainable as big companies. The most part of the biggest or medium-sized companies are members of the Minerals Council of Australia and due to this membership they are committed to the Enduring Value framework . However it seems that big companies are more future oriented than smaller ones, and consider responsibility issues more seriously.

> *"(And so the big company should) in theory (be trying to) protect their reputation, act more responsibly. … But it's easier for junior company to kind of (do the bankrupt) or to behave (a non-responsible) way." (Interview 21)*

> *"And that's one of the problems we have as an industry is that.. you know there's a small number of large companies like ours and then a very long tail, many many many, companies.. with much lower standards of performance often, and, it's those smaller companies that tend to color the reputation of the larger companies. So it is a problem, I mean that's one of the reason why we formed the International Council on Mining and Metals to really try and, establish that leadership body, and so we're very conscious of that but it's not easy to resolve it." (Interview 16)*

3.3 Life-cycle thinking

> *"in Australia you've got to give a bond, you have to give a bond to the government to, manage your closure costs and ensure there's enough money to do the closure. Sometimes that's quite a lot of, money. And sometimes, I know of times where the mine gets sold to a third party, leading up to the closure process and the third party takes on the responsibility of doing all that." (Interview 1)*

Life cycle thinking can be understood different ways. Life cycle assessment (LCA) of a product takes into account technology, different emissions and use of raw materials along the product's value chain. It is a standardised procedure (ISO 14044). However, in this report, life cycle thinking is defined in wider sense. Life cycle thinking of the mine includes pre-operational phase (planning, exploration), operational phase and post-operational phase (mine closure). Different phases effect on different environmental, social and economic changes.

Australian regulations contain the idea that a company should make a plan how to rehabilitate the land to a former state. The closure phase should be taken into account already in the planning phase of the mine in order to decide what will happen to the local community and its people and services. However in the interviews some of the interviewees pointed out that in Australia the closure of the mines is not handled properly in every case. There are mines that have been left out as such. However the closure process is considered in the mining process with a special closure bond.

Another way of seeing the life-cycle thinking in mining is the process of producing mineral resources in such a way that the process is profitable for the nation and the local community. Short term profits do not create economic sustainability. A short-term policy can also be seen in the business models in the mining sector. Profit is not used for long-term visioning and the well-being of the society. Some of the interviewees were thinking that Australia is missing an overall, long term strategy how to get added value from the minerals instead of exporting them as just raw material.

> *"… the biggest problem here, I think Australia has missed, a lot of the opportunities that the mining boom, gave to Australia. It started in the early 2000s, and there were huge investments and lots of money and so on. But most of the money was spent, on very short-term things, and wasn't invested in long-term infrastructure or funds or something to, take care of the future." (Interview 10)*

> *"…how mining and mineral processing can contribute to sustaining of society." (Interview 1)*

> *..is we need to stop talking about sustainable development (in) mining, and start talking about how mining contributes to sustainable development. (Interview 1)*

The third way of considering life-cycle thinking in interview results is related to the location of the mines. In Australia mines are often located in the wilderness, far from cities without community infrastructure like schools, hospitals etc. The mine workers are therefore seldom local people, and very often also they do not want to settle down to this wilderness, but want to travel between their home and working place. The local community is therefore not developing, but just providing short-term living place.

> *"A lot of workers actually wanna still live in the big cities and would just go and fly into the mines and fly back, and that's fine to one extent but all sorts of family problems, not always but for some people, it seems beautifully, they like the high income and so on, so to some it can work really well but certainly, others it can create very significant issues, depression, family, breakups and all sort of things,*

so the industry is sort of starting to look at that, not just starting, they're having sort of working very hard looking over all of those issues and balanced that. So, but that's one of the big issues in that sense so. it's actually looking at all of these things, not just the environmental thing, what happens after a mine closes.." (Interview 19-20)

"Because there hasn't a big, city built up around it. People have been flying in and out to little compounds, really. The negative of that is that the local community doesn't really get much benefit, from the mine." (Interview 1)

3.4 Customised and well-timed communication

"Well I think dialogue's really important, for community acceptance of mining. Especially in the initial stages when a mine is first being built." (Interview 21)

"if you've got proper detailed reporting everything else will follow." (Interview 19-20)

"so it's really kind of systematic way of doing this dialogue" (Interview 16)

"We looked at 50 cases of mining community conflict. The key things that come out are environment issues tend to be the trigger points of conflicts, and particularly water that you already identified, but the background issues tend to be that the state of the relationship between the company and the community. So if you've got a good community relations capability, if you've got good communication channels, if you're open in your dialogue and you're transparent you tend to have, less issues." (Interview 13)

I think I've seen the change, the improvement. There is a change towards positive side. I mean like, most of we measured because I've seen mining companies are concerned with economics, financial indicators. But I think I've seen that there is awareness, a bit of acceptability of environmental and social aspect. They were probably a bit, becoming more social because of the social licence to operate. One thing what I would like them to change is the reporting system so everything they report which you can quantify in terms of money, so like for example in diesel coal use,

> *they are, water use, they report because they are part of the operating cost. So I think that reporting system should be changed. It should not be an accounting tool. It should be also considered as an environmental indicator tool so that the environmental department and the accounts department should be together in such a way, they work together and then they use the same sort of information for operating cost and for environmental scorecard." (Interview 2)*

It is important to tailor the communication processes and messages for the different stakeholders and this can be done on various ways.

> *"… maybe they needed to have separate men's and women's meetings. They had meetings out in the bush, in tents, and…" (Interview 1)*

> *"They didn't pretend that the community was just one voice." (Interview 1)*

Also companies are different and hence could understand the communication processes and consider communication differently. Especially the difference can be big between small and big companies; small companies may not have the ability to communicate thoroughly.

> *"Actually I think some cases I have seen even some smaller companies they report quite nicely even not following probably that, one of the GRI or one of the reporting standard. But they are (in a sense) they report, but again maybe they are not familiar with, how to prepare those sort of reports properly so then that makes the confusion. In terms of methodology, I think all this reporting or the standards they have some methodology behind. However, I guess it's the matter of uniformity, unifying those standards into common metrical, common tool, that would be applicable to customise for mining and mineral industries. That sort of standard guidelines in the economic, particularly in the environmental and social area I'd like to see, to establish the sustainable development of mining and mineral industry in Australia." (Interview 2)*

Various people also understand the concept sustainability differently. It was suggested that instead of using the term Sustainable mining one should talk about Responsible mining, which leaves the content of sustainability open, but refers to the actions the company can do.

> *"when people talk about sustainable, sustainability, I think people have very different understandings of, what the word means whether it is about, the sustainability of the operation. Or whether it's about the environmental, values in the vicinity of the operation. Or whether it's about the sustainability of, livelihoods and, future health of people so, I think people use the word sustainability and sustainable development, in very different ways." (Interview 11)*

> *"So generally though, they like to, the social and environmental may go in parallel, but they'll first look at the resource and say okay can we develop this, we should talk to the community about it. And then after they talk to the community, because a lot of community concerns are about environmental issues, they then are addressed through the process. The other thing is at a regulatory level, most of the emphasis of governments is on environmental issues. That becomes, in terms of taking it through the process (you need the company to worry about) the economics and the government worries, about having (or the level of government) worries more about having an environmentally sustainable project. So they are all taken into account by the companies but the drivers, and the timing can be different." (Interview 15)*

The special characters of the stakeholders are good to consider also in the communication ways. Twitter, Facebook and other social media platforms are dialogue ways to modern people

> *"I use my smartphone, I cope with apps and iTunes but I'm not anything like my girls, in terms of the way they use it. And that different kind of communication ways, feels quite old school to me. How do we report? Let's do a stakeholder map and, talk about it and, the timeframe you are looking at here up to 2050. I think that's gonna be completely redundant." (Interview 11)*

There can never be enough knowledge based communication.

> *"If people can, check on a day-to-day basis about, they're worried about, cyanide in the water (course). If operations were willing, to say upload all their data about their environmental monitoring system, as soon as they get it, and people can have an app on their phone just." (Interview 11)*

> *"So what they do is they publish air quality results every day, in the papers." (Interview 17)*

People should be taken as a part of monitoring system, to let them take samples of their own and reporting their observations.

"…participatory water monitoring…" (Interview 13)

A tricky question is who is allowed to communicate with the community in a company. It will be beneficial also to the process designers to communicate with the community in order to understand the needs and worries of the people. This is heavily related to the company culture. The trend is also that increasingly not just one company is dealing with the community, but there are several companies that are being involved, from exploration to the mine closure.

> *"We can never, almost never, interact with the community. That's always done by the owner. So it's hard to encourage the designers to improve sustainability, if they don't have access to the, social and environmental context." (Interview 12)*

> *"But now what they've got is something that helps them make investment decisions, that if they want to improve their relationship with the community, they've got a sense of what the community wants, they've got a sense of what the community feels is important or values. So instead of doing that automatic thing where it's, we'll give money to this or we'll give money to that, they know what was working for them or not working for them and so their investment in that relationship with the community can be much more targeted." (Interview 3*)

Wallaby case – a successful stakeholder communication process

Wallaby case describes a stakeholder consultation process of a gold mine (Granny Smith) near Laverton city in Western Australia. The process consisted of four large formal stakeholder meetings. Each meeting had 22-45 participants and they were held over a period of then months. A number of smaller meetings and workshops were also arranged with different stakeholders. In addition 43 stakeholder interviews were conducted.

In the meetings the mine process as a whole were discussed together with the stakeholders, mining company, various experts and consults. Issues of Aboriginal participation, technical details, uncertainty of knowledge and impacts concerning the mine, different knowledge bases, decision making processes and stakeholder attrition were flagged in the process to be important issues.

The Wallaby case is an example of a well arranged stakeholder communication process in mining industry. The participants were satisfied for the process. It was a successful project most of all because of research, industry and stakeholder engagement early from the beginning of the project and emphasizing continuous dialogue.
(Solomon 2000)

3.5 Mine accepted by the society and by the community

> *"…in terms of the general, the first issue I mentioned is just, a, reality of, increased population, increased awareness of environmental issues and people being concerned about impacts on water, air and vegetation, and you know, they're becoming mainstream issues of concern rather than concerns of non-governmental organizations or others. So that would be some of the initial drivers. In terms of indigenous people's issues I think it's probably, a function of those organizations, having better access to support networks through social media, becoming aware of their rights, and the emergence of, the rights of indigenous people is a relatively recent thing. And so there's more activism, more.. interest and engagement around these issues." (Interview 11)*

According to the interviewed person, the company require that all their operations must have a stakeholder engagement plan. This means that the company identifies key stakeholders in local community and understands the concerns of the stakeholders and develops plans to address those issues. This dialogue is made systematically based on experience that there will become real problems if the problems could not be managed. This is how to work at local level, and at the global level the work will be done on so called Corporate Responsibility Forum.

> *"So in fact what is needed is kind of.. to move from, techno-economic approach towards more this kind of, where you include really the, taking care of the community" (Interview 12)*

> *This dialogue between the stakeholders, that's a requirement for, planning in Australia, that the company has to have, dialogue with the local community, and to explain, what they're trying to do and they get feedback from the community. So that has to occur. How effective it is, I don't really know. Whether the community's opinion is taken into account or not, I'm not sure. Certainly that's important (Interview 10)*

The main point of the acceptability process seems to be trust and how this trust is achieved. The trust comes from the relationships that often mean cooperation relationship when a mining company is part of the community and the there is a continuous dialogue between the mining company and different stakeholder, already from the planning phase.

> *"There's lot of uncertainty (in mining industry). … Now if you have a community, which is suspicious, and then you're not able to say with certainty. … It creates more suspicion. … So if the relationship is strong. Then you can use the strength of that relationship or the trust in that relationship, to get over those hurdles." (Interview 1)*

The essence of mining industry is full of uncertainty: the markets may go down, the ore may not be as rich and large as expected and there can be environmental problems. This creates challenges to the relationship and trust. There can be great challenges due to changed environment and water quality between the mines and agriculture. There are lots of assumptions and unclear knowledge concerning mining industry. Especially the economic value is unclear and often not communicated honestly due to uncertainties in economic situation in general.

Enduring Value and Leading Practice Guidelines as tools to increase responsible mining and trust between the stakeholders:

International Council of Mining and Metals (ICMM) has developed a framework and guidance called Enduring Value. It aligns with global industry initiatives, and in particular provides critical guidance on the International Council on Mining and Metals (ICMM) Sustainable Development Framework Principles and their application at the operational level. Furthermore, the aim of Enduring Value is to assist the industry to operate in a manner which is attuned to the expectations of the community, and which seeks to maximize the long-term benefits to society that can be achieved through the effective management of Australia's natural resources.

The Leading Practice Guidelines in Australian Mining Industry consists of 15 handbooks to address the key issues affecting sustainable development. The Guidelines are following consultation with the Australian mining industry and other interest groups (the Leading Practice Sustainable Development Program for the Mining Industry (LPSDP) There are a number of other themed handbooks in the series, which aim to complement this handbook. The leading practice handbooks are relevant to all stages of a mine's life exploration, feasibility, design, construction, operation and closure and to all facets of an operation.

The informative and user-friendly handbooks provide mine managers, communities and regulators with essential information on current sustainable mining practices. The case studies included in the publications encourage, assist and lead all sectors of the mining industry beyond the requirements set by legislation. Each publication was created with the oversight of individual working groups comprising experts in Australian mining, including Australian mining and minerals industry operators, Australian mining peak bodies and industry training providers, the Minerals Council of Australia, and Australian state and territory government agencies.

For instance, the following Handbooks are available:

Handbook on community engagement: This handbook addresses community engagement and development, a theme in the Leading Practice Sustainable Development Program. The program aims to identify key issues affecting sustainable development in the mining industry and provide information and case studies that illustrate a more sustainable basis for the industry.

Handbook on mine closure: This handbook addresses mine closure and completion, one of the themes in the Leading Practice Sustainable Development Program. The program aims to identify key issues affecting sustainable development in the mining industry and provide information and case studies that illustrate a more sustainable basis for the industry.

Handbook on Water Management: This handbook addresses the theme of stewardship, which is one theme in the Leading Practice Sustainable Development Program. The program aims to identify key issues affecting sustainable development in the mining industry and provide information and case studies that illustrate a more sustainable basis for the industry.

All of these Guidelines offer companies a lot of useful information how sustainability issues should be managed and reported. These reports are a good tool in creating trust and enhancing dialogue between the stakeholders.

3.6 Learning and creative mining industry

> *"I think what's needed is that the mining companies.. must try to educate communities about what, value there is in mining. There's not a great understanding of economic viability, in communities. So there's a natural assumption that, mining is very profitable and that there is more money, that could be given to the community than.." (Interview 12)*

There are two ways to develop learning and creative mining industry. Firstly the society could learn what mining industry is, what the prerequisites of mining are and what the earning logics in mining business are. Secondly mining industry could learn how to perform sustainable mining business at the society as a part of the society.

Proper knowledge and wise understanding of the complex issues are the most essential elements of successful mining processes. Taking the' third parties' like independent experts into discussion will build trust between the companies and different stakeholders.

> *"what they do in New Zealand is they require the mining company to have, to fund peer reviewers, who are acknowledged experts." (Interview 8)*

To combine knowledge and experiences is also a good way to achieve knowledge and understanding as well as resources to fulfil the needs of the demanding processes.

> *"For industry at the societal level, I reckon they should have the strong industry association that sets good standards on sustainable development that mirror the international (council) for mining and metal standards. Enduring Value though, I mean, it exists but I haven't seen it as a driver of change in Australia." (Interview 13)*

> *"So I guess they're doing, learning, doing and that's how, slowly probably improving. I guess that's the current state of continuous learning." (Interview 2)*

4. Discussion and conclusions – What did we learn?

The challenges for the mining industry in Australia and in Finland are not that different based on this interview research. Challenges are recognised in authority and stakeholder communication, in company culture, life-cycle thinking, in acceptability and in continuous learning attitudes in both countries. The biggest differences seem to relate to the sizes of the mining industry and to the size of these two countries. In Australia the share of the mining industry is around 20 % of the total economy, while in Finland the role of mining industry is marginal in the state economy. In Australia it is common that mining workers fly to the mine, work there, and fly back home, and no permanent infrastructure is built in the mining area. Mines in Australia exist thus in total wilderness.

The mining industry is an important industry sector in both countries, but larger in Australia. Since mines in Australia are in most cases placed in far rural areas, the meaning of the mine to the local economy is somehow excluded. However the impacts of the mine to the aboriginal people in the wilderness are recognised. There is also an ongoing discussion in Australia whether the mining sector could benefit the national economy more by processing the mining raw materials in Australia instead of exporting them.

In Finland and Australia the impartiality of the authorities is addressed; stakeholders interpret that authorities favour the industry. In both countries authorities are establishing standards for mining operations. The standard setting is sometimes facing challenges in identifying the changing values of the society, and also the needs of the markets.

Values in the society are continuously, though rather slowly, changing. In order to avoid conflicts, the development of the company culture should follow these changes. However, it seems that it is challenging for the business sector to integrate social responsibility into business strategies as an essential part of the strategy and the strategy process. This is especially challenging to junior companies, which often do not have resources to create long term strategies.

Closing of mines appears to be a bigger challenge in Australia than in Finland. This is probably because of the bigger mining volume. In Finland there is currently one mine to be closed in the coming years. Also the tendency to have

mines in total wilderness in Australia boosts the nature to “forget” the old mines into the wilderness.

Creating trust between the mining industry and stakeholders is the main task in finding the social licence to operate for the mining industry. In this trust creating process the crucial issue is a successful communication process. Since stakeholders are multiple the communication should be tailored for different purposes. People have various capabilities in understanding the knowledge and also different needs on what kind of knowledge they are waiting for. Different world views and interests, ideologies of the stakeholders, have to be considered in a communication process. Also future stakeholders should be addressed.

There are various ways to communicate and various communication techniques. An important element in communication process is also who is communicating. To name one specific person in the company may not be the best solution, since it distance the other personnel from the public. A good way according to Australian experiences is to provide an on line knowledge, real time data, for instance about the emissions of a mine in the website or in the newspapers. To hide the knowledge is the worst thing in communication processes.

The communication process may also be tailored in a way that citizens are collecting data and experiences concerning the effects and impacts of the mine by themselves. This is a one way to create dialogue between the stakeholders and the mining company. This may also be a good way to create trust and perform transparency in the mining actions.

Concrete examples of a good practice would be to hire a high repute peer reviewer into the mine planning processes, who will be experienced, wise and wide understanding person, who is trusted among various stakeholders. This kind of mode is used in New Zealand. Another concrete example of good practices is the role of strong industrial association creating cooperation between the stakeholders and the mining industry, and shaping the development path of the mining industry. Also the Wallaby case, where communication process was thorough and successful, as well as the written guidelines are worth mentioning.

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VTT Technology 264

Title	**What Finnish mining industry could learn from the Australian mining industry?** Social license to operate perspective
Author(s)	Nina Wessberg, Helena Wessman-Jääskeläinen & Johanna Kohl
Abstract	This publication provides an overview of what the Finnish mining industry could learn from the Australian mining practices. The analysis is part of Tekes' Green Mining program SAM project (Sustainable and Acceptable Mining). A number of interviews were made in Australia with researchers and representatives of mining activities. The interviews were conducted in collaboration with the Australian CSIRO research institute. The interviewees were asked about how the Australian mining industry handle issues related to social acceptability and what kind of good practices exist. Concrete examples of good practice were however rare. Two the most significant were: 1) to hire to the mine planning process always an experienced independent mining expert, whose task is to guide the process and ensure that everything necessary will be taken into account, as well as 2), underlining the strong position of the mining industry trade association in directing and acting in the mining industry and the future development. Based on interviews, it can be said that the challenges of the Finnish and Australian mining social acceptability of the field do not differ from each other significantly. Australia's largest mining challenges from the perspective of social acceptability are satisfactory completion of closing the mines and the creation of trust between the authorities and other stakeholders; the concern is that the authorities favor the mining industry in the interests of the rest of society, sacrificing, and on the other hand, the communication processes do not reach or touch different people. In Australia the mines are often located in the real wilderness. Employees fly to work in the mine, are working at a certain period, and then fly back home. Regional economic significance of the mines remain so low and the environmental impact of mines is to a large extent affecting specifically indigenous people. It was also made clear that consideration of the social impact in the mining processes and the achievement of social acceptability are often more feasible in larger companies than smaller companies. Also the Wallaby case, where communication process was thorough and successful, as well as the written guidelines are worth mentioning.
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Nimeke	**Mitä Suomen kaivosteollisuus voisi oppia Australian kaivosteollisuuden käytännöistä?** Sosiaalisen hyväksyttävyyden näkökulma
Tekijä(t)	Nina Wessberg, Helena Wessman-Jääskeläinen & Johanna Kohl
Tiivistelmä	Tässä julkaisussa esitetään yhteenveto siitä, mitä Suomen kaivosteollisuus voisi oppia Australian kaivosteollisuuden käytännöistä. Analyysi on osa Tekesin Green Mining -ohjelman SAM-hanketta (Sustainable and Acceptable Mining), jonka yhteydessä tehtiin Australiassa useita haastatteluja tutkijoiden ja kaivosteollisuuden edustajien parissa. Haastattelut tehtiin yhteistyössä Australian CSIRO-tutkimuslaitoksen kanssa. Haastatteluissa kysyttiin haastateltavilta, miten australialainen kaivosteollisuus hoitaa yhteiskunnalliseen hyväksyttävyyteen liittyviä asioita ja millaisia hyviä käytäntöjä on heidän tiedossaan. Konkreettisia esimerkkejä hyvistä käytännöistä löytyi varsin vähän. Näistä merkityksellisimmiksi nostettiin kaksi: 1) Kaivosten suunnitteluprosessiin palkataan aina kokenut puolueeton kaivosalan asiantuntija, jonka tehtävänä on ohjata prosessia ja huolehtia, että kaikki tarpeellinen tulee huomioiduksi. 2) Korostetaan kaivosteollisuuden toimialaliiton vahvaa asemaa kaivosteollisuuden tulevaisuuden ja kehittämisen suuntaajana ja toimijana. Haastattelujen perusteella voidaan sanoa, että Suomen ja Australian kaivosteollisuuden haasteet sosiaalisen hyväksyttävyyden saralla eivät poikkea ratkaisevasti toisistaan. Australian kaivosteollisuuden suurimmat haasteet sosiaalisen hyväksyttävyyden näkökulmasta ovat kaivosten sulkemisprosessien hyväksyttävä suorittaminen sekä luottamuksen synnyttäminen viranomaisten ja muiden eri sidosryhmien välille; huolena on, että viranomaiset suosivat kaivosteollisuutta muun yhteiskunnan etuja uhraten, ja toisaalta se, että viestintäprosessit eivät saavuta tai kosketa erilaisia ihmisiä. Yhteiskunnallisten vaikutusten huomioiminen ja sosiaalisen hyväksyttävyyden saavuttamisen prosessit ovat usein helpommin toteutettavissa suurissa yrityksissä kuin pienemmissä yrityksissä. Verrattuna Suomeen Australiassa kaivokset sijaitsevat usein maan suuruuden vuoksi todellisessa erämaassa. jolloin työntekijät lentävät kaivokseen töihin, ovat töissä tietyn periodin ja lentävät kotiin. Aluetaloudellinen merkitys kaivoksista jää siten vähäiseksi, ja kaivosten ympäristövaikutukset kohdistuvat suuressa määrin nimenomaan alkuperäisväestöön. Australian Wallaby-tapaus voidaan mainita erinomaisena esimerkkinä onnistuneesta viestintäprosessista. Myös useat Australiassa tehdyt alan ohjeistukset kannattaa mainita tässä yhteydessä.
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Social license to operate perspective

This publication provides an overview of what the Finnish mining industry could learn from the Australian mining practices. The analysis is part of Tekes' Green Mining program SAM project (Sustainable and Acceptable Mining).

A number of interviews were made in Australia with researchers and representatives of mining activities. The interviews were conducted in collaboration with the Australian CSIRO research institute. The interviewees were asked about how the Australian mining industry handle issues related to social acceptability and what kind of good practices exist. Based on interviews, it can be said that the challenges of the Finnish and Australian mining social acceptability of the field do not differ from each other significantly.

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