

**Turning Environmental Assessments into Community Action Tools:  
Mining Proposal in Fanny Bay**

**Final Report**

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**June 24, 2012**

**Cover Letter/Memo**

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CC: Jim Burgess, Community Representative

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DATE: June 24, 2012

SUBJECT: Final Report: Turning Environmental Assessments into Community Action Tools  
– Mining Proposal in Fanny Bay

The purpose of our final report is to demonstrate the steps that have been taken to accomplish this project, report our findings, make recommendations for CoalWatch, and finally indicate what we have learned from this project.

The service that we have provided to our client is the gathering and presentation of information in understandable terms. The proposed mine is to be built in close proximity of the Comox Valley and is greatly opposed by our project partner, CoalWatch. Their aim is prevent the construction of the project because of the environmental, social, and health problems it bestows on their community. Our goal is to assist them in achieving their aim by providing some recommendations regarding to the “Ladder of Citizen Participation” to the local communities about the mining project.

This report will be submitted to our course instructor Dr. Winkelman as a part of the MECH410 E course requirement. It will also be presented to CoalWatch as a more detailed and written form of what we have presented to them. We would deeply appreciate any feedbacks from Dr. Winkelman and CoalWatch as this feedback will be used as a part of our learning process.

## **Abstract**

The proposed Raven Underground Coal Project near Comox Valley has alarmed many of the residents within the area due to its environmental, healthy, and social issues. CoalWatch, as comprised of community leaders and members, is the partner organization of our community service-learning (CSL) project who are outspoken in their attempts to prevent the development of the Raven Mine project. Although they has been tried many ways to participate, there have only been token gestures made by the government and Compliance Coal Corporation. Our goal is to help CoalWatch to get their voice heard, and learn stuff from the CSL project. We have mainly focus on researching the relevant campaigns that can apply certain strategies for the particular situation in the Comox Valley. A public presentation has been done on Island to increase public awareness. This report covers all the findings we got from the research and the presentation, the recommendations are also provided for CoalWatch to help them move towards their goal.

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## **Main Body**

### **1.0 INTRODUCTION**

The community of Fanny Bay in the Comox Valley on Vancouver Island is the proposed site for a new coal mine development. Plans for the Raven Underground Coal Project are currently being developed by the Compliance Coal Corporation. Proponents of the mine say that the development will bring jobs to the region and provide a boost to the local economy. However, many community members argue that the mine will release pollutants, which are a threat to the local environment and could easily endanger the well-established shellfish industry. Moreover, the community is concerned with issues such as drinking water pollution, decrease in tourism, and dramatic increase in truck traffic on local roads. The governments have done little to protect the community members and are failing them on environmental and health protection. The one government organization that could stop the mine is the Environmental Assessment office, which, as the current Auditor General of British Columbia says, is not doing a good job protecting the environment. In response to this proposed development, the community group of CoalWatch has been formed by members of the community with the ultimate goal of halting any mining development in the area.

The Raven Underground Coal Mine is currently in the pre-feasibility stage. This means that development has not yet begun and an environmental assessment has not yet been completed. However, significant investments have been made and the cancellation of the project is not desirable for the Compliance Coal Corporation.

CoalWatch, representing the community of Baynes Sound, is protesting the mine development on environmental, social, economic and health reasons. Although the government has sought public input, this has merely been a token gesture without any changes coming from the community's input. The community's voice is not being heard. Although the development of the mine will have huge effects to the people living there, they have very little power in what will happen. The government needs to be accountable towards communities and people over profits and corporations. This level of citizen participation is described by Arnstein (1969) as "Consultation" on the "Ladder of Citizen Participation" (as seen in Figure 1). Arnstein argues that it may appear as though the citizens are participating in the process, but in the end they don't hold any real power to make changes. According to Arnstein (1969), it is necessary to move up the "Ladder of Citizen Participation" towards degrees of citizen power in order to achieve social justice. If the community at large is not in favour of the mine being developed, then they should have the power to stop it. This project aimed to help CoalWatch and the community to move up the ladder of citizenship.

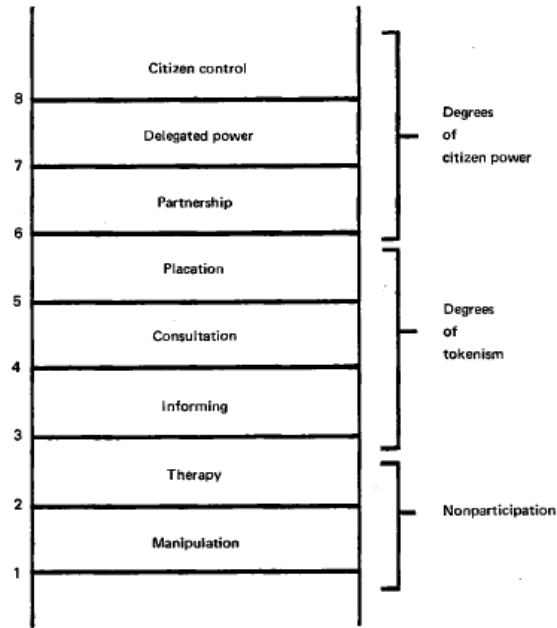


Figure 1: Ladder of Citizen Participation. Source: Arnstein (1969)

The community's voice is not being heard. Although the development of the mine will have huge effects to the people living there, they have very little power in what will happen. The government needs to be accountable towards communities and people over profits and corporations. According to Arnstein (1969), it is necessary to move up the "Ladder of Citizen Participation" towards degrees of citizen power in order to achieve social justice. If the community at large is not in favour of the mine being developed, then they should have the power to stop it. This project aims to assist CoalWatch and the community at achieving their goal.

## **2.0 PURPOSE**

The purpose of the project is to help CoalWatch and Comox Valley community members move up Arnstein's "Ladder of Citizen Participation" towards some degree of citizen power that will allow them to have a say in the proposed mine's future, including the termination of the plans. If the community at large is opposing the mine being developed, the Compliance Coal Corporation and the government should consider this issue seriously and carefully to find an optimized solution to get it solved or minimize the opposing voices. By providing relevant information and parallel campaigns that were successful in halting development of industrial projects in favour of human rights and values, we hope we can successfully move the CoalWatch and the community up to the ladder at the level of "partnership" so that their voices can be heard by both the Compliance Coal Corporation and the government.

The project will also aim to further publicize the issue with the hope that public knowledge will provide further support to CoalWatch's cause, by providing several recommendations we have concluded and summarized from the information we found during research. This support should then cause real government action to include a transparent and effective public input process and a reliable independent environmental assessment.

This project will also help develop our team's leadership and teamwork abilities by having to work together as a team and together with our client, CoalWatch. At the same time, it will strengthen our communication capability by giving us new experiences that we can learn from.

### **3.0 PARTNER ORGANIZATION, PARTICIPANTS, AND COMMUNITY**

There are three main stakeholders affiliated with the project: CoalWatch, Comox Valley community and the Compliance Coal Corporation.

CoalWatch is the partner organization for this project and is comprised of community leaders and members who are outspoken in their attempts to prevent the development of the Raven Underground Coal Project. However, they claimed that the government and company have performed inadequate environmental assessments. There have only been token gestures made by the government and Compliance. This project aims to directly assist CoalWatch and change their current condition of non-participation.

The Comox Valley community will be indirectly affected by our project. Since the mine is within the community, the mine's potential environmental effects can have a negative impact on the community members' lifestyles. For example, if any hazardous materials or substances were to leak downstream into Baynes Sound, the shellfish industry within the Comox Valley could be severely harmed. The mine's potential to pollute the surrounding air and environment of the Comox Valley can bring forth negative health effects for the residents, directly impacting their well-being. Therefore, successfully helping CoalWatch to get the government and the company's attention may effectively stop the mine and prevent the community from becoming worse.

Since the mine is proposed by the Compliance Coal Corporation, our attempts to aid CoalWatch, on one hand, may counter the purpose of the corporation. If successful this would indirectly prevent the development of the mine, and therefore lead to the loss of potential revenue for the Compliance Coal Corporation, in addition to loss of investment and possible harm to their image. Although we are not working for the corporation, they have much at stake from as a result of our project. On the other hand, our involvement can remind Compliance Coal Corporation of community's concerns and prevent them from making a mistake.



#### **4.0 GOALS AND OBJECTIVES OF THE PROJECT**

The goals for this project are intended to help the community move up the ladder of citizen participation and to raise awareness of the coal mine issues within the community:

1. Find relevant campaigns that were successful in halting development of industrial projects in favour of human values including environmental, health and social issues.
2. Examine parallels between the relevant campaigns and the Raven Underground Coal Project in order to apply certain strategies for the particular situation in the Comox Valley.
3. Investigate relevant information regarding the effects of the Raven Underground Coal Project and translate them into easily comprehensible terms for CoalWatch and the community at large.
4. Increase awareness on the issues by holding a public presentation about the project and our findings.
5. Based on the findings of goals 1-3, provide recommendations on ways for CoalWatch to continue their campaign.
6. Enhance our leadership, teamwork and communication abilities by working together with CoalWatch.

## **5.0 DESIGN APPROACH AND METHOD**

### **Research on the Proposed Mine**

We started our project by a thorough research on the proposed Raven mine. In our study we went through the materials available in CoalWatch's website, the mine proposal by AMEC (Compliance Coal Company's consultant), local newspaper's letters to the editor, and the public comments available on environmental assessment office website. These provided us with a fair understanding of the current issue of the proposed mine.

### **Phone/E-mail Contacting/Meeting with CoalWatch**

Initially the clients were contacted by email, with various questions regarding to their expectation and the parts students should pay attention to. Then communication through email was made frequently for a general idea and the progress regarding to the project. Later on a face-to-face meeting was set up at Horseshoes Bay for a better communication and discussion about the direction and the goal of the project. It gave us a better understanding of the direction and the content we should mainly work on and pay attention to.

### **Researching the Parallel Campaigns**

The research on the parallel campaigns that were successful or unsuccessful in halting development of industrial projects was done mainly on Kemess North Gold-Copper Mine, Quinsam Mine, Prosperity Gold-Copper Mine, and Keystone XL Pipeline. The research provided us some general examples and ideas to apply certain strategies for the particular situation in the Comox Valley.

### **Visiting the Waste Rock Piles of Tstable River Mine**

Tstable River Mine, opened in 1949 and shut down in 1966, was showed to us while we were in the Fanny Bay for the presentation. It gave us a better idea of how the mine has affected the river and the environment around the area, and the disappointment from the local communities. The mine is now the government's responsibility to clean up after the company left it there irresponsibly, which provided a better understanding of why the local communities are so strongly opposing the Raven mine's development in Fanny Bay.

### **Presentation**

The public presentation was coordinated by CoalWatch and was held in Fanny Bay community hall. During the presentation we gave a brief introduction about ourselves and why we are doing this project. Then, we introduced the concept of the citizen participation and the ladder of citizen participation to the audience, and we explained why we believe that non-participation is being forced to their community. Moreover, we talked about parallel successful campaigns and we provided the audience with recommendations on how they can move up the ladder of citizen participation. We came up with these recommendations by considering what made the parallel campaigns successful or unsuccessful.

**Written Report/Website**

A written report and a relevant CSL project website is available for CoalWatch, Comox Valley local community, Compliance Coal Mine Corporation and anyone who may be concerned. The report and the website are based on our research on the parallel campaigns, the findings we obtained by visiting an old mine site, the feedback we received from the presentation on island, and the recommendations for CoalWatch and coal community.

## **6.0 RESULT**

We have looked at relevant case studies and found parallels that can apply certain strategies for the particular situation in the Comox Valley. The research is mainly focussed on Kemess North Gold-Copper Mine, Quinsam Mine, Prosperity Gold-Copper Mine, and Keystone XL Pipeline. We have also put our findings into the public presentation in Fanny Bay to increase public awareness, and the feedback we received from the presentation is useful for us to better understand situation and provide them a better service.

### **Kemess North Gold-Copper Mine**

Kemess North Gold/Copper Mine is the first mining project that was successfully rejected by the federal and provincial governments when it went to Environmental Assessment process. As a result, many insights and lessons are useful for us to work on our case.

The Kemess South Gold mine was approved by the province's BC Environmental Assessment Office in 1996. In 2000, the Kemess North gold mine project was proposed as a major expansion of the Kemess South mine, involving a new open pit adjacent to Duncan Lake. In 2003, Northgate Minerals Corporation began preparations to submit the Kemess North gold mine project to the provincial environmental assessment office, which would later join with the federal review office to examine the project. On March 7, 2008, the federal and provincial governments formally refused to approve Kemess North project.

Two independent feasibility experts had assessed the project at the panel's request, and concluded that the project is not economical worthy to develop since the project was expected to increase life of existing mine by only 11 years. It raised doubt in the panel's mind whether the company would be able to actually fulfill its long-term post-closure commitments. In the end, the panel said it was "satisfied that the loss of the natural lake would be viewed as culturally and socially detrimental by Aboriginal people, and the Panel considers this effect to be significant." This conclusion was a proof the panel had listened to public views and concerns.

Feasibility studies are a useful source of early information to understand a proposed project's economic benefits and risks. However, companies usually ignore the projected impacts to local community rights and interests or underestimate the environmental and healthy consequence of the project. It is important to make studies publicly available and realistically evaluate the project's benefits and risks so that studies are more accurate. For our case, we should ask the Compliance Coal Corporation and the governments to have a comprehensive feasibility study of Raven Underground Mine including the community concerns and the long-term environmental impact of the project.

The other key lesson to learn from this campaign is to draw attention on the impact of the mine to first nations in Comox Valley. Since Aboriginal people would experience first-hand any

impacts on traditionally-used environmental resources, B.C. mining laws do provide some safeguards for First Nations and the environment. Although the weaknesses still exist in government's policy, we can raise certain concerns for governments by having First Nations involved.

### **The Prosperity Gold-Copper Mine**

The Prosperity Gold-Copper Mine, owned and managed by Taseko Mines Limited, is located near Williams Lake in central British Columbia. In 2010, Taseko completed the feasibility study, and entered the Provincial and Federal Environmental Assessment process. The Provincial Environmental Assessment was approved later but the Federal Environmental Assessment failed. Another Federal Environmental Assessment was done in 2011 and it has still not been approved federally. Improvements regarding to the environmental issues and First Nations' concerns was continuously done to make everything works for both Taseko and the Aboriginal people because Aboriginal groups have organized together to work and communicate efficiently with Taseko.

One of the similarities between the Raven Mine and the Prosperity Mine is that they both have a major industry relying on the water. The Raven Mine has the shellfish as one of the most important local economies, and the Prosperity Mine has fishing as one of the major sources of local income. Fish Lake, one of the main fishing spot for local communities there, was one of the major issues that the Aboriginal People were strongly opposing the mine at the beginning. Taseko first planned to build their tailings pond in the area of the Fish Creek, because initially they viewed these fish insignificant, as they provided very little source of income for the First Nations people in the area. They believed that creating another lake, Prosperity Lake, in a nearby area, and filling it with fish which would be of economic value to First Nations people was a viable solution. However, this is simply not the case; the local people eat the fish themselves and value the area for the cultural heritage it provides. Fish Lake is considered to be an integral part of the heritage and culture. For them, nothing can be replaced and its destruction could not be justified by any compensation measures. Since the First Nations were so strongly opposing the proposed Prosperity Mine, Taseko decided not to touch the Fish Creek, instead they have figured out somewhere else as the tailing pond. Although the Environmental Assessment is still not being approved yet, Taseko has made a lot of effort to make everything works for both them and the Aboriginal people.

From the case of the prosperity mine, we found that the efficient cooperation and communication are quite significant, because without it, Taseko and the Aboriginal people would forever keep what they stand for, and the improvement and progress could never be achieved for a solution. Therefore, the recommendation is to get organized together as a group to take actions together, which would be efficient and effective.

### **Quinsam Mine Expansion**

Quinsam mine was built near the Campbell River area in 1986. The mine employs over 140 people. In 2009, the Hillborough Resources, which owns the mine, proposed an expansion of the mine into the 7-South area. This proposal was objected by many local and environmental groups as the mine was already doing a poor job in respect to the environment. The reports show that one of the lakes close to the mine, named Long Lake, has very high levels of arsenic which is probably caused by the seepage of material from the mine to the nearby waterways. In spite of the campaigns against the mine expansion, the expansion was approved in 2012.

What we learned from this campaign is that once a mine is built in an area, it is always easier for the mining company to get an expansion on it. A new mine always has to go through an environmental assessment, but the expansion does not need to necessarily go through an environmental assessment as this was the case in the Quinsam mine. This can help many locals at communities close to Fanny Bay to have a better understanding of the situation. They may think that they will not be affected by the mine since they are a few kilometres away from it; however, a mining company may easily expand their mine and move to their back yard without needing an environment assessment.

### **Keystone XL Pipeline**

Although this project is not a mine, many parallels can be found in the campaign to stop this pipeline. The Keystone XL pipeline, proposed by the TransCanada Corporation, is a 2700 km extension to the current Keystone pipeline which will carry oil from the Alberta oil sands to the Gulf Coast of the United States, as seen in figure 2. The project has already been approved by the National Energy Board of Canada but is pending approval by the US Environmental Protection Agency and various state authorities. Due to various campaigns to stop the project, the final decision on the pipeline permit has been delayed until at least 2013.



Figure 2: Proposed Keystone XL Pipeline Route (source: <http://www.state.gov/r/pa/pl/170342.htm>)

There were various campaigns to stop the pipeline. The national campaigns, which focussed on the broad issues, received a lot of media coverage and included mass protests at the White House. These campaigns were protesting the dependency on oil and the link to climate change. Local campaigns, particularly in Nebraska, focussed on the immediate environmental impacts that would arise. They also considered the chance of an oil spill and the damage that it would do.

Although the local campaigns received very little media coverage compared to the national campaigns, our research shows that these local campaigns are the reason for the permit approval delay. While the national campaign targeted huge issues, the fact is that one pipeline, either approved or denied, is not going to make a big impact on the large problem of climate change. Climate change is a long-term impact that does not affect one community specifically. However, local impacts are immediate and affect specific communities. Politicians therefore feel more pressure from their local constituents to do something about it.

They key lesson to learn from this is that for most governments, local and immediate issues matter much more than global future issues. Future generations can't vote and one coal mine or one pipeline won't do much either way in terms of climate change.

The bigger reason why local issues matter is because the dynamics of resource development mean that the opponents need to win over and over again, while the developer only needs to win once. If there is money to be made, someone (or perhaps the same people) will try again to develop the mine. People are more likely to lose interest and be worn down when dealing with a small part of a massive future issue; but threaten their health (or they children's health) today and people tend to fight harder and longer.

### **Presentation**

Before having the presentation at Fanny Bay Community Hall, our clients brought us to the waste rock piles from the Tsable River Mine at Union Bay for a visit. It has been abandoned since 1966 and now it is the government's responsibility to clean up because the leaching has caused serious problem to the water around and the environment. The water in the sea reflected a color of orange due to the leaching of iron from the waste rock. The shells around the sea are also covered and affected by the iron. This helped us understand why the local community is so strongly opposing the development of the Raven Mine. Although it could provide an increase to the employment rate, the damage on the shellfish industry and the environment could take a heavier toll. Increasing the employment rate definitely does not justify all the damage and suffering the community could go through over the years.

For the presentation, there were a larger number of participants than expected. While presenting, we noticed the great concern of the community toward the mine development. From the questions they asked, we could definitely tell that they have put a great amount of time and effort into researching relevant information. During the dialogue between the audience and our group, we felt that they understand us from our point of view and appreciated the effort we put into the presentation. With the positive feedback, we felt the community was thankful for our recommendations.



## 7.0 DISCUSSION

Looking at the parallel campaigns, the analysis suggests that an increase in citizen participation is possible. While increased citizen power is not always in the interest of those in power, it is sometimes possible for communities to take control of decisions that affect them. Different strategies are necessary depending on the particular situation, and it will be up to CoalWatch to adapt the recommendations given in this report as they see fit.

When starting this project, our team mistakenly assumed that CoalWatch would be a community organization that wasn't very well organized and that didn't really know what they were doing. We were quickly proven wrong and could easily see that the organization was very well organized and had many members with relevant expertise in various fields. While this made our job of finding how we could help harder, it was encouraging to know that they were on the right track towards citizen participation.

Our public presentation in Fanny Bay showed us how much the community cares about the issue. Even though CoalWatch did not have the proper amount of time to promote the event, the number of people who came exceeded our expectations by a long shot. This by itself suggests that the community is ready to learn as much as possible about the issue in order to run a successful campaign. We were also surprised by how well informed the community was. Most people were very knowledgeable about the mine and the many social and environmental impacts that it could cause.

This engagement is especially is very encouraging towards moving up the ladder of citizen participation because our research suggests that apathy is a main cause of non-participation. When citizens are not informed and don't make an effort to be informed, they are not able to participate.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions:**

Our number one goal in this project was to help the CoalWatch and the Fanny Bay community move up the ladder of citizen participation. By holding a presentation, making case sensitive recommendations, and having a constructive discussion during and after the presentation, we believe we have achieved this goal to a high extend. During the presentation, many have commented on our proposed recommendations, and it could be seen that the community is responding positively to the ways we showed them to increase their participation in the issue. As an example, cooperation with local first nations on the issue of mine to have a stronger voice was one of our recommendations that we came up with when we analyzed the previous campaigns. This was warmly supported by the majority of the people at the presentation.

Equally important to the first goal, our second goal from this project was the learning that we got along the way. We communicated effectively in our team and with our clients, preformed a thorough research on the subject, worked as a team to provide solutions and recommendations, and finally presented our findings to the community. Throughout these steps, we improved our abilities to communicate, research, teamwork, and finally we got a chance to present in front of over 100 people who may or may not agree with us on the points we discussed.

### **Recommendations:**

1. Make sure that there is clear communications between you and your clients. In our case, we could not fully focus on our goals of this project until we met with CoalWatch representatives in person. If this is a possibility, be aware that in person meetings in most cases will be much more effective compared to email/phone communications.
2. If a public meeting/presentation is being hold, make sure both sides with opposite interests are invited. In our public presentation, the CoalWatch only invited their members and the locals that were on their side. As a result, the discussions during and after the presentation were extremely one-sided and against the mine. We figured, if mine representatives were also invited the dialogue between the two groups could be more helpful.

## 9.0 REFERENCES

- AMEC Earth & Environmental. "Raven Underground Coal Project Updated Project Description." May 2011.
- Arnstein, Sherry R. (1969). "A Ladder of Citizen Participation," *Journal of the American Institute of Planners*, Vol. 35, No. 4 (July).pp. 216-224.
- Canadian Environmental Assessment Agency. (2007). "Joint Review Panel Report: Kemess North Copper-Gold Mine Project." September 17, 2007.  
<http://www.ceaa.gc.ca/052/details-eng.cfm?pid=3394>
- Congressional Digest. (2011). *Keystone XL Pipeline Overview: Overview and Issues for Debate*. Washington: Library of Congress.
- Course Syllabus "2012 MECH 410E Global Engineering Leadership." Retrieved May 23, 2012 from <http://mech.ubc.ca/2012/02/10/7163/>
- Furco, Andrew. (1996) "Service-Learning: A Balanced Approach to Experiential Education." *Expanding Boundaries: Service and Learning*. Washington DC: Corporation for National Service.1996.pp.9-13
- Heitland, Mia. (2012). "Quinsam Coal mine expansion approved". *Campbell River Mirror*. January 26, 2012
- Laplante J.P. (2009). "Kemess North: Insights & Lessons." Takla Lake First Nation. 2009, <http://www.carriersekani.ca/current-issues/mining/>
- Protect Fish Lake, <http://www.protectfishlake.ca/>
- Report of the Federal Review Panel, 2010, *Prosperity Gold-Copper Mine Project*  
[http://beta.images.theglobeandmail.com/archive/00953/Report\\_of\\_the\\_Feder\\_953641a.pdf](http://beta.images.theglobeandmail.com/archive/00953/Report_of_the_Feder_953641a.pdf)
- S.L. Gardner,P.Geo"Coal Resources and Coal Mining on Vancouver Island." *Gardner Exploration Consultants*. 3.2.3.4