Diamond mining, or any sort of mining is clearly not sustainable. You dig a hole, you take stuff out of the hole, and take it somewhere else. Eventually, the hole runs out of the stuff you were digging up. That is not sustainable.

But as an activity, diamond mining can be made to contribute to sustainability. Firstly, we recognize that development is necessary to eliminate poverty and to provide economic choices for northern peoples. The question then remains, how do we make this development (in this case, diamond mining) as sustainable as possible?

2 Principles to help make diamond mining contribute to a sustainable economy

1. Preservation and restoration of the natural environment, to ensure that choices for future generations are preserved. This would mean that the ecological footprints of mines are minimized and that impacts on the natural environment fit within accepted limits of change in environmental indicators. It would also mean that reclamation standards are clearly set out, fully funded, and met.
2. Social and economic impacts, both positive and negative, are recognized as being attributable to the mining development and strategies to buffer or reduce negative impacts are incorporated in the planning and pursuit of mining opportunities.

The Impacts

Although diamond mining is not the worst form of mining in regards to its environmental impact, impacts are already being felt from the two diamond mines currently operating in the Northwest Territories. Those physical impacts include:

- loss of fish habitat through draining of lakes, destruction of streams, changes in water quality. Water quality changes are measurable as far as 200 km downstream of Lac de Gras (Ekati mine), and there have been irreversible changes to water quality and possibly species composition in Snap Lake (De Beers diamond project). Twenty lakes have been eliminated altogether, with no fish habitat compensation measures in place.
- loss of land-based habitat for wildlife such as caribou, grizzly bears, and wolverine. For instance, radio-collared cows from the Bathurst caribou herd spend 7-8% less time feeding in close proximity to the Ekati mine.
- Increased production of greenhouse gases. Both diamond mines are currently fuelled by millions of litres of diesel. Each mine makes a significant contribution to the greenhouse gas produced by the Territories every year.

Social and cultural impacts from the two existing diamond mines are also being felt.

A sudden influx of money into communities creates some social tensions, and this can show up in increased amounts of substance abuse and family violence. The shift-work patterns imposed on workers at the mines disrupt normal social rhythms, taking parents away from children and elders for weeks at a time.

Even though the existing diamond mines have made commitments to attempt to hire northerners, they are having trouble meeting their quotas. There are simply only so many people ready, willing and able to work in the mines. That means an influx of migrant workers will be necessary if companies continue to develop new mines at a pace faster than the resident labour force can absorb.

This is of course not an argument that the provision of jobs and money to people in northern communities is a bad thing, but it must be recognized that some negative effects can accompany the benefits. These negative effects must be taken into account in planning diamond mines to attempt to minimize the disruption that comes with the benefits of development.

It should be noted that Ekati and Diavik mines are governed by agreements that provide for some substantial social benefits—training, trade certification and community programmes, for example. These agreements, and the companies' willingness to contribute to the new diamond cutting and polishing industries, are definitely steps in the right direction. What is needed here is some territorial and federal policy governing the kinds of social support and economic diversification objectives that need to be met in the context of diamond mining—or any other mining, for that matter.

Lack of planning and monitoring hampers sustainability

For diamond mining in northern Canada to be more sustainable, planners need to have an idea of what values are the most important to protect. This is usually done through a process called land use planning which identifies areas of the land important to local people, and important to

the health of the environment. There are no settled land use plans for the areas where the diamond mines have been developed, or for the areas most likely to be developed in the future. There are also no permanent protected areas in the land between Yellowknife and the Arctic Coast (the Slave Geological province) where most of the diamonds have been found.

The federal government made some promises before the diamond mining began about how it would manage the effects of several new developments in the Slave Geological Province (a huge area of the NWT and Nunavut that is exceptionally rich in diamonds, gold and base metals). It is several years behind on its delivery of those promises. A Cumulative Impact Monitoring Program, mentioned in Part 6 of the Mackenzie Valley Resource Management Act, and constitutionally entrenched in the Gwich'in and Sahtu land claims agreements, is now more than five years overdue. A cumulative effects assessment and management framework, a condition of the Diavik mine environmental assessment approval, is now over two years behind on implementation, and has no adequate or long-term funding. The infrastructure to support diamond mining is in some ways more of a concern than the mines themselves. Roads, airstrips, and power plants all have implications for the viability of diamond mines, and also their sustainability. A winter road stretching hundreds of kilometres north from Yellowknife to the barren lands has just been renewed for another thirty years, despite never having undergone a rigorous environmental assessment. To date, the infrastructure for diamond mining in the north has received little attention, and more is being added all the time.

Lack of federal monitoring of diamond developments is also an issue. Over the past few years, there has been no funding for cumulative impact monitoring program, and co-management bodies do not have resources necessary for their work. The federal government itself seems short of resources for adequate monitoring. Both of the operating diamond mines in the north went without federal inspection for several months.

CARC's Recommendations

Apart from the two principles we mentioned above, we have several more specific recommendations to help improve the contribution of diamond mining to sustainable development:

Recommendations

- Need for comprehensive economic development strategy to avoid the 'bust' of non-renewable resource development.
- Need for well-funded, integrated environmental management system including cumulative effects assessment and implementation of limits of acceptable change (the objective of CARC's Plan for the Land Program).
- Need for public review of economic rent from diamond mining.
- Need for targeted use of non-renewable resource revenues to governments to promote economic diversification and more sustainable forms of economic development.
- Serious consideration of mining alternatives, phasing and timing of development to

ensure that benefits and retention in the North are maximized.

- Rigorous sustainability assessment needed for any further development in the Slave Geological Province.