Science

Reliable understanding does not always require lab coats, calculus and controlled conditions.

ROBERT

LIFE ON THE north Labrador coast is a test. The land has wild beauty, and its resources have supported human communities for millennia. But it is all rock and hard places. Its people have had to be tough, skilled, willing to support each other, and deeply knowledgeable about their environment.

John Edmunds and George Gear had those qualities in abundance. When I met them in the mid 1970s, they were the experts selected by the Labrador Inuit Association to represent coastal community interests in a uranium mining review.

The proponent was British Newfoundland Exploration Limited (Brinex), whose geologists had found potentially commercial uranium orebodies near the communities of Postville and Makkovik. Brinex had spent considerable money developing mining plans and preparing an environmental assessment. It promised local jobs and other economic benefits. But the residents of Postville and Makkovik feared adverse long-term effects, especially because the wastes left behind would contain radioactive materials with half-lives exceeding 1,000 years.

Provincial approval of the mining proposal depended in part on the adequacy of the environmental assessment. In those early days, Newfoundland and Labrador did not yet have a formal environmental assessment review process, but the province invited the Labrador Inuit Association to represent coastal residents at a small assessment review meeting in St. John's. There, the Association's experts would face the chief scientist from the proponent's environmental assessment consulting firm.

The meeting had four key players: the lead provincial official, the proponent's consultant with his hefty report, professional record and recognized scientific credentials, and John and George, who had between them perhaps a half dozen years of primary schooling, plus decades of trapping, hunting and fishing in the region around Postville.

It was soon clear whose form of learning would prevail.

Most of the meeting consisted of John and George going methodically through the consultant's document, pointing out local wildlife that were missed or misidentified, important plant species that were not reported (apparently some of the vegetation surveying had been done in a Labrador February), key interspecies relationships that were not recognized, delicate lands and vulnerable species that were overlooked, and so on, page after page.

In the end, the provincial official concluded that the environmental assessment was beyond inadequate. It was not salvageable. He turned to the lead consultant and suggested that he start over.

Brinex attempted to recover by commissioning a different consulting firm to do a new environmental assessment, which it defended before a formal public hearing panel. But once again the company encountered well-informed community opposition and the mining proposal was rejected, in part because of the local experts had identified gaping deficiencies in the new environmental assessment.

Since then, rights to the orebodies have shifted to other mining companies. Eventually, if the market price for uranium rises enough, another application for uranium mining near Postville and Makkovik may enter the assessment review process. But any such proposal now will face the legacy of John, George and others who established local knowledge as a crucial foundation for informed decision making.

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While "science" and "local knowledge" are still often treated as separate categories, we now know they overlap. The local knowledge that John Edmunds and George Gear presented at the St. John's meeting was scientific.

Their methods of information gathering, analysis and reporting were not those of the academe. But the fundamentals of their approach adhered to the principles of reliable science. Their knowledge of the natural environment was built on lifetimes of close observation and peer collaboration. It was empirical, highly detailed and tested openly under the stern discipline of making a living in northern Labrador.

John Edmunds and George Gear were exemplary representatives of their community. In their own way, they were also exemplary scientists. AJ

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