

APPENDIX F-7:
Brasilian and Canadian Experience – Watershed Models in
Environmental Awareness

In Canada and Brasil, literacy and effective communication on environmental issues was accomplished amongst the volunteers by engaging the community with presentations about their watershed. The objectives of the work in Canada and Brasil were similar in promoting sustainable livelihoods, but differed due to the scope of works, time allotted and several cultural differences including a variance in: industrial, environmental and economic and social circumstances. The social and economic gaps and influence of the industry on the surrounding areas were prominent in Brasil; it was prevalent that short-term economic interests, not conservation, are the local priority, resulting in resource abuse rather than sustainability. In Canada these influences exist, but are not as prominent as in Brasil.

In Canada The Rock Bay Contaminant Reduction Initiative, had an objective to improve stormwater discharge into Rock Bay and the Gorge Waterway through a Residential Pledge Program, Education Outreach, a Business Best Management Practices Program (BMP) and a Business Recognition Program. Publicity and awareness of the issues were raised through educational activities in community's schools, pamphlets distribution, community center newsletters and a Rock Bay web site. This occurred over a two-year time period. In Brasil the focus of my involvement was environmental education by through community participation and understanding of the various imperatives of sustainability in a watershed context through the construction and presentation of watershed models. This occurred in a time-period of about 6 months with 125 days allotted to developing the educational activities. Although the BMP and business recognition program has been initiated in Brasil by introducing various people, including the Secretary of the Environment in Três Marias, to the process used in Canada. The majority of time and effort was focused on environmental education with the use of watershed model as an effective tool in creating sustainable changes.

An essential component of the Rock Bay Contaminant Reduction Initiative is the provision of an educational framework to highlight daily activities and how we affect the water quality-entering Rock Bay and the Victoria Harbour. The objective of the

educational outreach program is to instill watershed awareness at schools in the Rock Bay Watershed. Each class participating has received three visits involving the following four components: a slide show presentation of the local marine ecology, an interactive watershed model of Rock Bay, a felt display to compare and contrast a healthy and unhealthy watershed, and fish stenciling of storm drains. The students have become aware of how their interactions in the neighbourhood affect the local waterway and the Pacific Ocean. This has been successfully implemented with each school residing in the watershed including: the Burnside Community School, Quadra Elementary, George Jay Elementary, Oaklands Elementary, and Victoria High School; involving 39 class presentations and reaching over 890 students it has generated a great interest amongst the local neighbourhoods, green organizations and schools. The project evolved with the development of 10 watershed murals created by various participating classes that were placed on the hoarding around Rock Bay located in the center of downtown Victoria. This allowed for the appreciation and recognition of the students involved.

In Brasil, with a shorten time period and a focus on using the watershed model for environmental education, the participatory method of having the community and local youth involved was greatly enhanced with a greater number and broader range of people involved in the process. Participating in all stages of constructing watershed models, from understanding and planning the process to presenting the concerns to the public, many benefits and achievements for sustainable education occurred. The participatory learning atmosphere developed with cooperation from broad set individuals in three communities - Três Marias, Barreiro Rio, and Pirapora - in which watershed models were made. It allowed for a dialogue of sustainable values within each community and involved representatives from: municipalities, public companies, local youth, industries and various community members.

In each situation the youth increased their knowledge and literacy of the environment through presentations and discussions of problems and solutions. Behaviors became focused on the environmental concerns, and discussions revolved around ecological health issues associated with residential and industrial activities. In Brasil the use of natural vegetation on the watershed allowed for learning of the local ecosystems. While in Canada, the youth were involved in presenting the watershed and providing solutions through the introduction of a Residential Pledge Program. The number of enthusiastic

youth eager to participate considerably surpassed the level of youth participation in Canada.

Given a larger variation in education backgrounds in Brasil, larger strides were made with understanding the associated concerns in a watershed context. Furthermore, the educational component of learning about watershed was improved with various field trips of the areas. This facilitated discussions on local environmental concerns, and allowed for “experiential learning” in which various exercises provided a comparison and interpretation of the surroundings through hearing seeing and smelling and recording of observations on maps. This promoted the process of seeking to learn. They were able to extend their perception of the environment by generating knowledge and observing the complex issues surrounding community sustainability. The field trips provided a better sense of place, which can extend into caring more for their surroundings with new perceptions of the environment.

Many differences in addressing sustainable livelihoods occurred between the Brazilian and Canadian approaches. However, one similar approach was the use of watershed model for educating the community of the various concerns in a watershed context. The difference in the Brazilian approach involved having community participation in the construction process. It is apparent, when involving the community in construction process, it provides for more opportunities of learning constructive and creative ways of representing community concerns. As well it provides for many different opportunities for the youth involved and allows for greater development of self-confidence, public speaking abilities, creative expression, and an in-depth understanding of the participatory and interactive process of addressing concerns.

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