

PROFILE FOR
COMMUNITY
ACTION
SERIES



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Biodiversity: A Profile for Community Action

**A Companion to Harmony Foundation of Canada's
Community Action Workshop Manual**

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Extract from:
Biodiversity: A Profile for Community Action

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Introduction

Congratulations on taking an important step towards protecting biodiversity. Knowledge is power, and by understanding what biodiversity is all about and why we're losing it, you can decide how your community can best add its efforts to the initiatives taking place across Canada and around the world.

You'll find this Profile tells you what you need to know about biodiversity in clear, accessible language. The **Overview** explains what biodiversity is, why it's important, what's causing the loss of biodiversity in Canada and around the world, and what can be done to protect it. At the back of the Profile, the **Biodiversity Cheat Sheet** provides a summary and fast facts in a handy three-page format.

You'll also find inspiration in the pages that follow. The **Success Stories** provide a wealth of ideas on how communities can take action to protect biodiversity. Read about what groups across Canada and internationally have done to conserve genetic diversity, monitor species, protect and rehabilitate habitat, and manage resources in a sustainable manner. You'll also discover lots of resources for further information in each of these areas.

The **Personal Action Checklist** at the back of this publication has some excellent suggestions on changes you can make in your own life to protect the diversity of life on this planet.

If this Profile motivates you to action, you may want to consider some of the other publications and programs that Harmony Foundation offers. *Biodiversity: Profile for Community Action* is only the tip of the iceberg – there is an array of tools available to you through Harmony's **Building Sustainable Societies** program, outlined below.

The Program

As the diagram on page 3 illustrates, *Building Sustainable Societies* is a three-tiered program composed of training sessions, community action workshops, and local initiatives. The goal of the program is to provide community groups with the necessary knowledge and project planning skills to launch successful biodiversity projects.

The Training Session

In our Training Sessions, we prepare community group representatives to run Community Action Workshops, by familiarizing you with the activities and facilitation techniques in our Community Action Workshop Manual. Contact us to find out if we'll be offering one in your region in the near future.

The Community Action Workshop

The Workshop provides your group with an opportunity to work together to learn more about a selected environmental issue, identify community assets and needs, articulate a vision to solve a particular problem of your choice, and develop an action strategy. Above all, it is an opportunity for your group to work as a team. You'll find a more detailed description and agenda for the Workshop on page 4.

The Community Action Workshop Manual

This *Manual* is an ideal companion to the Profile you are now holding. While the Profile provides you with a clear understanding of biodiversity loss, the *Community Action Workshop Manual* shows you how to take effective local action through a simple and tested project

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planning framework. Together, the *Community Action Workshop Manual* and *Biodiversity: Profile for Community Action* provide you with everything you need to tackle the threats to biodiversity.

We hope you'll find a wealth of ideas and information in *Biodiversity: Profile for Community Action* and that you are inspired to act on the knowledge you will gain. Good luck in all your present and future endeavours, and remember that education is the starting point for global change.

As Margaret Mead famously remarked, never doubt that a small group of committed people can change the world – in fact it's the only thing that ever has.

Guiding Principles

The design and content of Harmony Foundation's Training Sessions and Community Action Workshops are based on the following educational principles:

Values-Based

An examination of values provides the foundation required to effectively understand one's own and other's world views. From this understanding participants can consciously and conscientiously benefit from various perspectives and actions to generate innovative solutions.

Experiential

Experience is at the base of learning. The experiential learning cycle involves concrete experience, reflection on the experience, concept building and application, and it challenges people to rise beyond their current level of thinking and acting.

Holistic and Multi-disciplinary

Holistic education involves the whole person. It appeals to all dimensions of an individual (i.e., emotional, spiritual, intellectual, physical). A multi-disciplinary approach promotes learning through the integration of subjects. Effective social change education programs examine the interrelationships amongst many fields of study and amongst the various elements of societies.

Systemic

Understanding the systemic relationships between individuals, societies and the environment contributes to an integrated approach to problem solving. Everything we do affects something or someone else.

Cooperative

Cooperative learning is interdependent; we learn with each other and from each other. Both the facilitator and the participants contribute to the educational process.

Based on Critical Thinking

Critical thinking is a process, not a result. Critical thinkers aim to identify and challenge their own assumptions and knowledge about a particular topic or issue, along with information presented to them. They are open to forming new ways of viewing an issue and generating innovative solutions.

Situated within a Global Context

Community-based initiatives are central to effective environmental and social action, yet they must be understood within regional, national and global contexts in order to effectively bring about long-term change. Societal change must happen at all levels in order for initiatives to be truly supported by and integrated into societies.

An Overview of Biodiversity

Purpose

This section provides an introduction to biodiversity: what it is, why we need it, and its current state, both in Canada and internationally. It also looks at the reasons there is a worldwide decline in biodiversity, and what we can do to halt this disturbing trend.

The better we understand the issue, the more effectively we can take action.

Introduction

Throughout the world, a diversity of life – often referred to as biodiversity – exists. Most often, we hear about the importance of protecting tropical rainforests, which contain approximately half of the world’s species. We also hear how compelling species such as the giant panda or the African elephant are in danger of extinction. Indeed, these ecosystems and species are very precious to this planet. Yet, there are many other types of ecosystems and species, even in our own provinces and territories, which are just as important, and just as worthy of protection. Think of how different Canada would be, for example, without its temperate rainforests of British Columbia or arctic regions of the Northwest Territories, Nunavut and the Yukon, and the species within them.

The biodiversity of ecosystems, species, and their genetic makeup are vital components of this planet. Increasingly, however, a multitude of combined pressures, including population explosion, over-exploitation of natural resources, pollution, climate change, urbanization and industrialization, are threatening the world’s biodiversity and, in turn, the overall quality of life on this planet. Currently, more than 11,000 species of plants and animals alone are facing a high risk of extinction in the near future, largely because of human activities (IUCN, 2000a).

Humans are clearly the driving force behind the current losses of biodiversity at local, national and global levels, and it is our responsibility to stop and prevent these losses. There are many ways to get involved, through changing our day-to-day choices, supporting organizations involved with protecting biodiversity, advocating for stronger legislation, or working towards a fundamental change in our society’s perception of biodiversity so it becomes a higher priority for communities, government and the private sector.

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The remainder of the Overview (pp. 8-23) covers the following topics:
What is biodiversity?
Why is it important?
What is the current state of biodiversity?
What causes biodiversity loss?
How can we protect it?
.....

Community Success Stories

Purpose

In the following pages, you'll find lots of inspiring "success stories" – descriptions of projects that community groups across Canada and around the world have undertaken to conserve biodiversity and you can too!. We've chosen examples of projects on genetic biodiversity, species monitoring, habitat protection and sustainable resource management; and everything from small-scale, inexpensive initiatives to quite ambitious undertakings. Read on!

Introduction

We hope you'll find the following Success Stories provide you with inspiration, coupled with plenty of practical, nitty-gritty detail. Each of the profiles outlines the project, who was involved, what it cost, how long it took, what made it successful, what problems the organizers encountered ... all the information you'll need to determine whether your group could undertake something similar.

You'll also find a selection of excellent resources to turn to for more information at the beginning of each section. Below, you'll find some general resources on biodiversity. In addition, there is a Naturalists' Society or Federation of Naturalists in most provinces. You can find a list at the Federation of Alberta Naturalists website (www.fan.ca) by checking their links page. The provincial environmental networks are another excellent resource. You can find the contact information for the network in your province by contacting the Canadian Environmental Network, listed below.

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Pages 28-60 provide 20 Canadian and International Success Stories in the following categories:

- Conserving Genetic Biodiversity*
- Species Monitoring*
- Habitat Protection and Rehabilitation*
- Sustainable Resource Management*

Samples from three Success Stories follow.

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Seedy Saturday

The Urban Farm Museum Society, Halifax

Goal of Project:

To offer a forum where people can buy, sell and trade open-pollinated seeds and learn about saving seeds.

Number of People-hours Involved:

"A few hours here and there over three months."

Length of Project:

One-day event.

Budget:

No budget; costs were minimal.

Partnerships Involved:

Nova Scotia Organic Growers Association helped by associating its name with the event; many people have heard of the Association, but the Museum Society is less well known. Seeds of Diversity helped by advertising the event and offering advice and services. The Captain William Spry Community Centre let the group use its fax machine and office supplies.

Major Funders:

None.

Marjorie Willison has been a gardener for years and works as a gardening consultant, but right now she's more interested in planting ideas than turnips. Willison is part of the Urban Farm Museum Society, a group in Spryfield, Nova Scotia, just on the outskirts of Halifax. As part of their efforts to celebrate Spryfield's agricultural history, the group of 15 locals organized its first Seedy Saturday last year.

Seedy Saturday is an annual event in cities across Canada where people buy and sell open-pollinated varieties of vegetable, fruit, flower, grain and herb seeds. Most seed companies now sell hybrid seeds. Hybrids are created by crossing parent plants that are not the same variety. This can create a desirable combination of characteristics, but the seeds produced from hybrids are not viable, forcing gardeners to buy new seeds each year. In contrast, open-pollinated varieties produce viable seed. Heirloom varieties, which are open-pollinated, often are more flavourful, and more beautiful (or at least unique-looking). These seeds have been saved and have stood the test of time because of their desirable traits – taste, pest resistance, or frost hardiness, for example – not because they pack well and can survive a trip of several hundred kilometres to the grocery store. No square, tasteless tomatoes here!

Willison and the other members of the group were attracted to the project as soon as they heard about it: "We liked the idea of being dependent on each other and coming together for a social event to talk about seeds, trade seeds and buy and sell them. And, it reminds people that we should be growing more of our own food." This project is helping people to do just that.

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The group held their free event in a seniors centre in 2000. The venue was “packed to the gills,” says Willison, and people had a lot of fun buying, selling and trading vegetable, flower, and herb seeds. The society sold seeds from members’ gardens, mostly common flowers, vegetables such as baking beans and a few herbs. There were a dozen sellers and about 90 buyers. Willison was able to do most of the organizing work herself for that first event, though it was a bit much at times. She secured a site, contacted seed sellers through lists from Seeds of Diversity and the Nova Scotia Organic Growers Association, sent out public service announcements advertising the event and handed out flyers to shoppers at Halifax’s farmers market.

In 2001, the event took place in a larger space in a more central and commercial area of town, and the gardening answer booth, as well as the day’s demonstrations (on how to graft apples, how to start seeds and how to save seeds) were held in a room separate from the buying and selling, so they wouldn’t get lost among the seed sellers. Most of the shoppers were from Halifax; Willison is making an extra effort to try to get more people out from Spryfield. The sellers in both years have been people who are already saving their seeds; Willison would like to see more people begin to start saving their seeds now that there’s a venue for selling and trading them.

“It’s a lot of fun and there’s rich potential. People like the idea of saving seeds and trading them around, but they need encouragement and an environment that will support that. We’re helping to provide the environment by organizing this event.”

Seedy Saturday events are sponsored by Seeds of Diversity, a charitable organization dedicated to conserving, documenting and using public-domain non-hybrid plants. Seeds of Diversity helps groups put on events by putting new organizers in touch with experienced organizers, by co-sponsoring events and by advertising them. The group has developed a handbook for new Seedy Saturday organizers, available on its website.

Contact Information:

The Urban Farm Museum Society,
c/o 10 Kidston Road
Halifax, Nova Scotia B3R 2J7
tel: 902-477-7896

Seeds of Diversity Canada
PO Box 36, Station Q
Toronto, Ontario M4T 2L7
tel: 905-623-0353
email: office@seeds.ca
www.seeds.ca

Cold Brook Restoration Project

Atlantic Coastal Action Program – Saint John

Goal of Project:

To restore the habitat of Cold Brook.

Number of People-hours Involved:

A co-ordinator worked full-time for the project's six-month duration, overseeing the project; two university biology students conducted a biological survey; volunteers reviewed potential plans and continue to keep an eye on the ongoing state of the stream.

Length of Project:

Six months in total; most of the construction work was done in two months.

Budget:

About \$20,000, the majority of which was used to build and install deflectors.

Partnerships Involved:

No formal partnerships. The group secured the co-operation of the stream bank's landowners (the City of Saint John, McAllister Place shopping mall, Irving Oil Ltd. and private individuals), so that it could access the site.

Major Funders:

The federal government (through EcoAction 2000) and the provincial government (through the New Brunswick Environmental Trust Fund).

Everyone wants a comfortable, relaxing home - even fish.

With this in mind, a group in Saint John, New Brunswick set out to restore a half-kilometre stretch of Cold Brook, a stream that runs through the city.

The City of Saint John had channelized the shallow, slow-flowing stream to reduce the risk of flooding. But channeling left the stream in a very unnatural state – it was the same depth all along its course, its bottom didn't change, the water flowed in a straight line, and there was little overgrowth along the banks.

All in all, not a good home for fish. Fish want a stream with variety – a stream with fast riffles that mix oxygen with the water, and cooler, deeper pools where they can rest and feed. There were only a few fish in the channelized Cold Brook: some dace, sucker and eel.

So late in the summer of 1999, the Atlantic Coast Action Program–Saint John decided to make the stream a little more welcoming. In consultation with the Department of Fisheries and Oceans it designed and paid for the installation of log crib wing deflectors – triangular piles of rocks in the stream held in place by logs – which reshaped the stream and restored its natural winding, meandering nature. Deflectors constrict the water, and in doing so, increase the flow of water, which increases scouring on the stream bottom. This causes variations in bottom depth, encouraging the formation of these deep, cool pools that are so attractive to fish.

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In addition, the group planted 15 native trees and about 30 berry bushes along the stream banks. The water-tolerant willow and red spruce shade the water and keep it cool for the fish. The bushes, with their fruit, attract wildlife. To create habitat for birds and bats, the group also installed nesting boxes.

At the beginning of the project, two biology students from the University of New Brunswick conducted a biological survey and took water quality samples. The group will use this baseline to monitor the impact of the project over the next few years. "Improving the habitat of a stream will improve the number and diversity of fish and insects, will attract mammals and birds and so on. The whole system benefits from an improved habitat," explains Sean Brilliant, the group's executive director. Brilliant feels an increase in species abundance is very likely to happen over time, and an increase in species diversity is a good possibility, though more difficult to foresee.

The group chose Cold Brook because it was in a residential area, where people would actually see the project and its impact. The group wanted to demonstrate that urban streams can be diverse and ecologically significant. Saint John residents too often view them as ditches, dumping tons of garbage into them every year, says Brilliant.

The group made a point of meeting with local residents and landowners who might be impacted by the project and educating them about their plans for the brook. People reacted positively, recalls Brilliant, although many were surprised the waterway was anything more than a ditch.

Securing community support is critical with projects like this, he says. "And you have to recognize everybody in the community. You have to recognize that the local oil refinery is a part of your community and that the local services group is a part of your community." And that fish are as well.

Atlantic Coastal Action Program – Saint John works to improve the environmental health and integrity of the Saint John River Estuary. The non-profit group takes on 12 to 20 projects a year, through two full-time staff, contract workers and hundreds of volunteers.

Contact Information:

Atlantic Coastal Action Program – Saint John
76 Germain Street, PO Box 6878, Station A
Saint John, New Brunswick E2L 4S3
tel: 506-652-2227 / fax: 506-633-2184
email: acapsj@fundy.net
<http://user.fundy.net/acapsj/>

Omani Paimanda Project

Niugini Wildlife Society, Papua New Guinea

Goal of Project:

To conserve the Engae Dendrobium, an orchid, and two species of bird, known as the Miok in the local vernacular.

Number of People-hours Involved:

Unknown.

Length of Project:

Ongoing. The United Nations Development Programme began funding the project in 1997. Funding stopped in 1999, but the project continues.

Budget:

K30,000 (approx. \$14,500 Cdn), plus K50,000 (\$24,200 Cdn) for a feasibility study. The coordinating group is looking for new funding so it can continue the work.

Partnerships Involved:

Partnerships with local clans, who hold land through traditional land tenure.

Major Funders:

The United Nations Development Programme and Pogera Joint Venture, a joint mining venture between Placer Dome Inc., Goldfields Porgera Limited, Orogen Minerals (Porgera) Limited, and Yuwai No. 65 Ltd.

Some students from the University of Papua New Guinea didn't forget their lessons once the school term had ended. In the classroom, they were heavily exposed to environmental issues. Back in their own village, they saw the impacts of logging, and they started to think about what could happen to their forests if environmental factors were not taken into account. They decided to apply their lessons to real life.

Papua New Guinea is thought to have between five and seven percent of the world's species, many of which aren't found elsewhere. Over the past ten years, the area has seen the slow but steady increase in unsustainable land use practices. Although communities have been receptive to the forestry industry because of the money it brings to the local economy, the ecosystem was beginning to suffer from logging, population pressure, subsistence agriculture and portable sawmills.

The area the students were concerned about is the Paimanda Range, in the central province of Enga. The area is rich in biodiversity, lushly forested with oak and beech, and contains sacred ceremonial sites. It is also home to the *Engae Dendrobium*, an orchid, and two bird species, the *Astrapia Nigral* and *Astrapia Rothschildi*. The birds, locally known as "Miok", have long black tail feathers that are prized by men who use them in their traditional headdress. The area used to boast the country's largest supply of Miok, until hunters and loggers reduced their numbers and the natural habitat dramatically.

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The students chose to focus on a 65-km² site at the top of the Paimanda Range, 3,000 m above sea level. Though intact to some degree, the area is threatened by domesticated pigs who forage and by humans who clear the forest for gardening, causing habitat destruction and soil erosion.

Working with the Niugini Wildlife Society, the students secured funds from a mining company operating in the province to conduct a feasibility study on protecting this site. They then took their idea to the people, hosting a community-wide forum and getting the message out.

There was widespread support for action, and community representatives were appointed to the management committee of the project. The group got funding from the United Nations Development Programme (UNDP) Small Grants Programme, which it used to reforest the scars in the site, to develop a nursery of endemic orchid species, and to protect the habitat of the Miok and other endemic flora and fauna. Even a number of local landowners came on-side, declaring their forests off limits to loggers and to uncontrolled hunting.

Although the land is not legally protected, conservation rules have been set and the area is monitored by the management committee, who charge those breaking the rules.

This was a big project to undertake, remembers Thomas Paka, the national co-ordinator of the UNDP's granting program in Papua New Guinea. The project involved about 13 tribes and took about three years to set up. "The major challenge was to really get the different tribes involved in the project," he recalls, "Basically, to make them understand what conservation is and how important it was to them and their children in the long run." Paka has learned that involving all the stakeholders at all stages, from planning to implementation, is fundamental. And also that budgets and work plans must be realistic.

But it was worth it, he says: "The major impact was the general awareness the project had on the lives of the people at the community level and even at the policy level about conservation and its importance. The provincial government is now fully supportive of the idea and is encouraging other districts to start projects like this."

Although UNDP funding ended in 1999, the project continues, and its impacts continue to be felt.

Contact Information:

United Nations Development Programme
3rd Floor ADF House, Musgrave Street, PO Box 1041
Port Moresby, Papua New Guinea
tel: +675 321 2877 / fax: +675 321 1224

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*The final two sections of the **Profile** contain Fast Facts on Biodiversity and a Personal Action Checklist which provide practical actions each of us can take to protect biodiversity.*
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Harmony Foundation Sponsors

Building Sustainable Societies is made possible by the following sponsors, who share our commitment to the principles of leadership, innovation and excellence in environmental education and community capacity building:

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