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TABLE RONDE NATIONALE SUR L'ENVIRONNEMENT ET L'ÉCONOMIE

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NRT-1991016

Resource Integration Systems Ltd.  
Sustainable Developments ~~Initiatives~~

# Community – Based Sustainable Development Projects

A Report to  
the National Round Table  
on the Environment  
and the Economy

May 1991

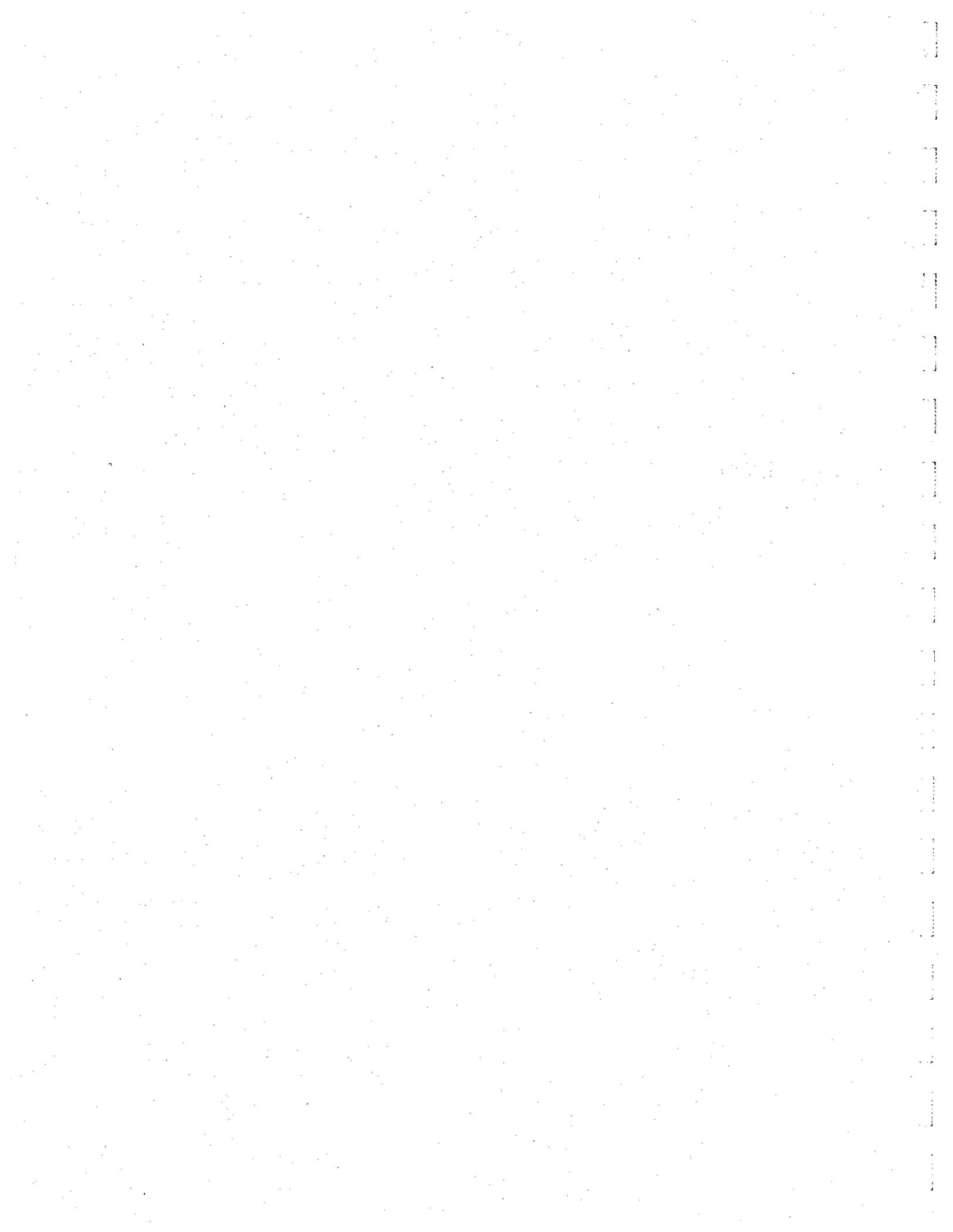
Prepared by

Resource Integration Systems Ltd.  
Toronto • Hartford • Portland • Brussels

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## EXECUTIVE SUMMARY

A program to investigate community-based sustainable development initiatives in several regions throughout the world was launched in November 1990 by members of Resource Integration Systems Ltd. The primary objective of this program is to observe examples of the principles of sustainable development in practice and, if possible, to identify aspects of these examples which are transferable to other existing or planned development efforts.

This report includes the results from research in five of the development initiatives observed in South East and Central Asia:

- Alliance for Human Rights and Environment (Philippines)
- Ubud Tourism Development (Indonesia)
- Rancamanyar Ecoville (Indonesia)
- Tangail Community Development Program (Bangladesh)
- Chipko Andolan (India)

Together, these efforts demonstrate a wide range of specific development strategies, such as forest management, tourism, small business development, recycling, agroforestry, ecological agriculture, recycling and rural industrialization. The organizational tactics, education methods, and technologies used in these cases are equally diverse.

Each community initiative was analyzed according to a basic framework of principles of sustainable development. The principles are grouped into general theme areas, as follows:

- Basic Human Needs
- Basic Human Rights
- Self-Determination
- Equity
- Economic Opportunity
- Ecological Integrity
- Social and Cultural Integrity

In assessing the communities on this basis it was found that the full range of categories were addressed directly or indirectly in each case. All are successful in their own way: the lives of community members are being improved, processes of change have been set in motion, and the elusive balances between environment and development are being pursued with skill, sensitivity and participation.

An additional analysis was completed to identify key factors that are contributing to success in the five cases. These factors suggest strategies and tactics that can be supported and possibly replicated in ongoing efforts to encourage sustainable development:

- Effective Organization at the Community Level
- Mutually-Supportive Partnerships
- Security of Land Tenure
- Alternative Income Generation Opportunities
- Low-Cost, Accessible Credit
- Innovative Community Education Processes
- Practical, Participatory Research Techniques
- Application of Local Ecological Knowledge
- Special Consideration for the Roles of Youth and Women
- Integrated Approaches to Development Issues
- Measures to Promote Regional and National Impact

Overall, the five communities profiled in this report are making real, tangible progress toward sustainable development. As such, they offer a number of important lessons for Canadians, including those who are trying to introduce more sustainable practices here at home, as well as those who are wrestling with similar challenges through our development assistance programs abroad.

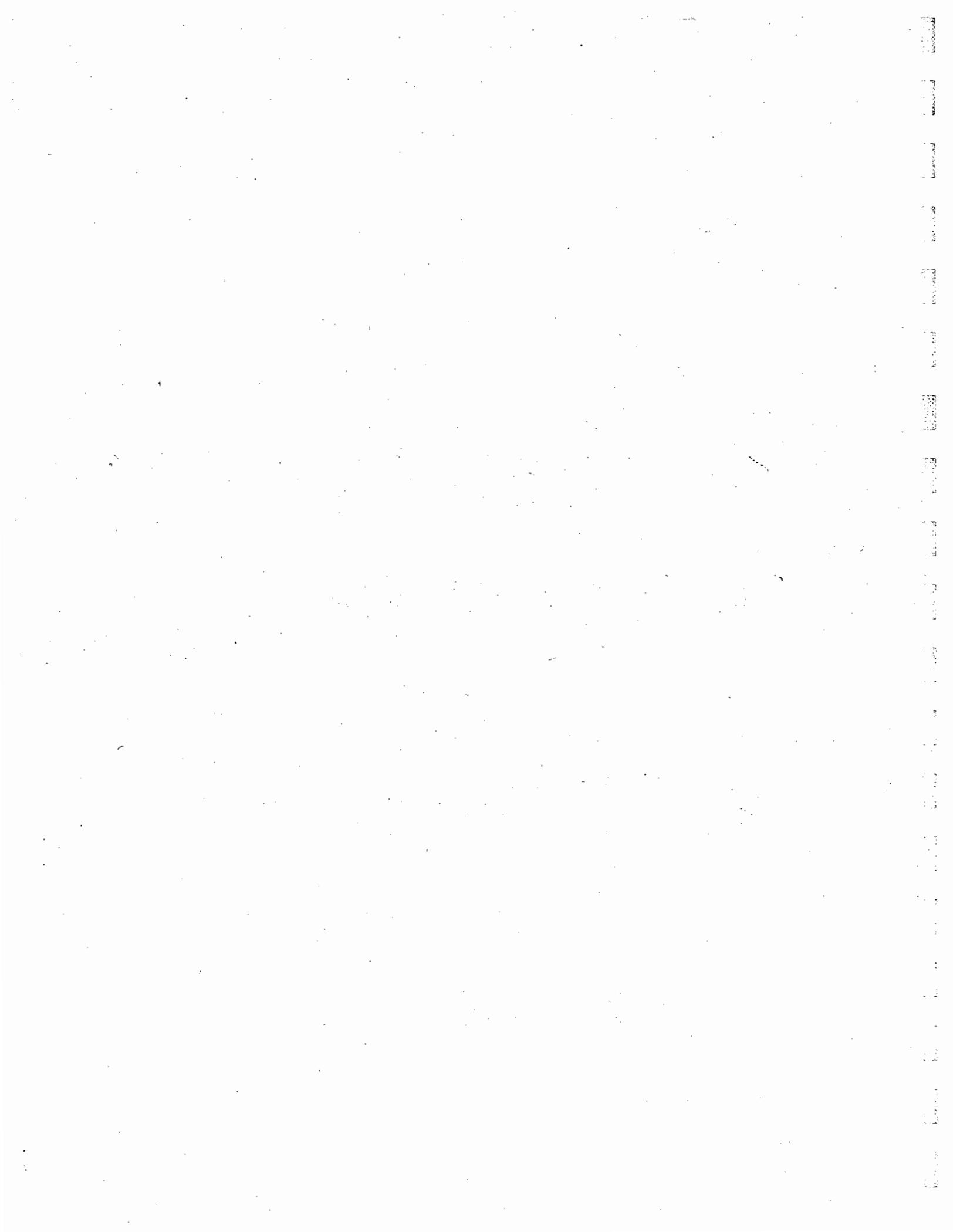
Some of these lessons address specific methods or technologies, while others relate more to the processes of development, including methods of organization and education, strategies for involving youth, women and indigenous peoples in development, and approaches for dealing with the full range of development challenges in an integrated manner.

Finally, the report outlines a number of suggestions for possible action by the National Round Table on the Environment and the Economy (NRTEE) in an effort to encourage sustainable development at the community level. These suggestions are listed in four general categories, as follows:

- Sustainable Development Guidelines
- Information Exchange/Development Education
- Canadian Development Assistance Policies and Programs
- Sustainability in Canada

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## 1.0 INTRODUCTION

This report is based on the premise that sustainable development is not only possible, but that it is happening, today, in many small-scale, community based programs around the world.

These situations occur when communities are able to assume some practical control over their own development, and take on the challenge of development on many fronts -- providing basic needs such as food and shelter, protecting human rights, inventing systems for managing resources and making decisions, promoting equity and self reliance, generating new economic opportunities, and doing all of this in a manner that is ecologically, socially and culturally responsive.

Many critics are quick to dismiss such small scale efforts as admirable, but of marginal significance when compared to the daunting challenge of global sustainable development. Clearly, sustainable development will never be achieved on a global scale without macro-reforms to repair the massive flaws that exist in development policies, political systems and economic structures at the national and international level. But this does not mean that community efforts are unimportant. On the contrary, they offer what are among the few observable clues to sustainable development that are available today. They demonstrate the concept of sustainability *in practice*. Collectively, community-based efforts are already changing the way in which development is viewed in many countries. And they represent an essential component of any sound sustainable development strategy, which must by definition address all levels -- global, national, regional and local.

With this background in mind, a program to investigate community-based development initiatives in several regions throughout the world was launched in November 1990 by members of Resource Integration Systems Ltd. The first phase of this program was completed in March 1991, and included field research in several communities throughout South East and Central Asia. Future phases will focus on East Africa (1991), Central and South America (1991-92), and other regions yet to be defined.

The primary objective of this research program is to observe examples of the principles of sustainable development in practice and, if possible, to identify aspects of these examples which are transferable to other existing or planned development efforts.

The report that follows includes the results from research into five of the development initiatives observed in South East and Central Asia. It is organized as follows:

- The general **Approach** to study is outlined in section 2.0. This section presents the conceptual framework that has been used to assist in selecting, researching, and evaluating projects.
- Descriptive **Community Profiles** for each of the five development initiatives selected for this report are included in section 3.0.
- **Analysis Part I: Principles of Sustainable Development** is presented in section 4.0. This is the first of a two-part analysis, and it attempts to assess and compare each of the five development efforts in terms of fundamental principles of sustainable development.
- In section 5.0, **Analysis Part II: Success Factors** distills from the five initiatives a list of eleven "factors" which are considered vital to the success of community-based projects. Each factor is described using practical examples from field research.
- Finally, general conclusions and suggestions for possible action by the NRTEE are included in section 6.0, entitled **Implications for Canadians**.
- References from the literature of sustainable development are listed in the Appendix.

## 2.0 APPROACH

A framework has been developed to assist in collecting, organizing and analyzing information throughout the course of this research program. The framework focuses on principles of sustainable development, and it is presented as a matrix in Figure 1.

The matrix draws heavily from the literature of sustainable development (see Appendix). It is not intended as another sustainable development model or theory. Rather, it simply attempts to summarize the main principles of sustainable development which are found throughout the literature and in most debates on the subject. The principles are grouped into seven general themes, and each group is accompanied by a short list of examples of strategies that may be used to promote the principles at the local level.

It is recognized that these themes are closely interrelated and that they may overlap in some cases. However, it is assumed that the matrix serves as a valid tool, in that communities that demonstrate at least some progress in all or most of the theme areas are also demonstrating a form of sustainable development on a local scale.

This matrix has been used to assist in the selection of development initiatives (see section 2.0). A deliberate effort was made to locate initiatives which, based on secondary sources available at the outset of project, appeared to address as many of the theme areas as possible.

The matrix has also been used as a guide for field research and as a framework for categorizing and evaluating research findings. Each of the development initiatives profiled for this report have been assessed in terms of how they address the basic sustainable development principles. The results from this process are presented in section 4.0.

It should be noted at this point that the emphasis throughout the course of this study has been on open-ended exploration, rather than conclusive research or hypothesis testing. The intent has been to launch investigations which are as open and receptive as possible to ideas from a diverse variety of development initiatives. A wide variety of research methods, including

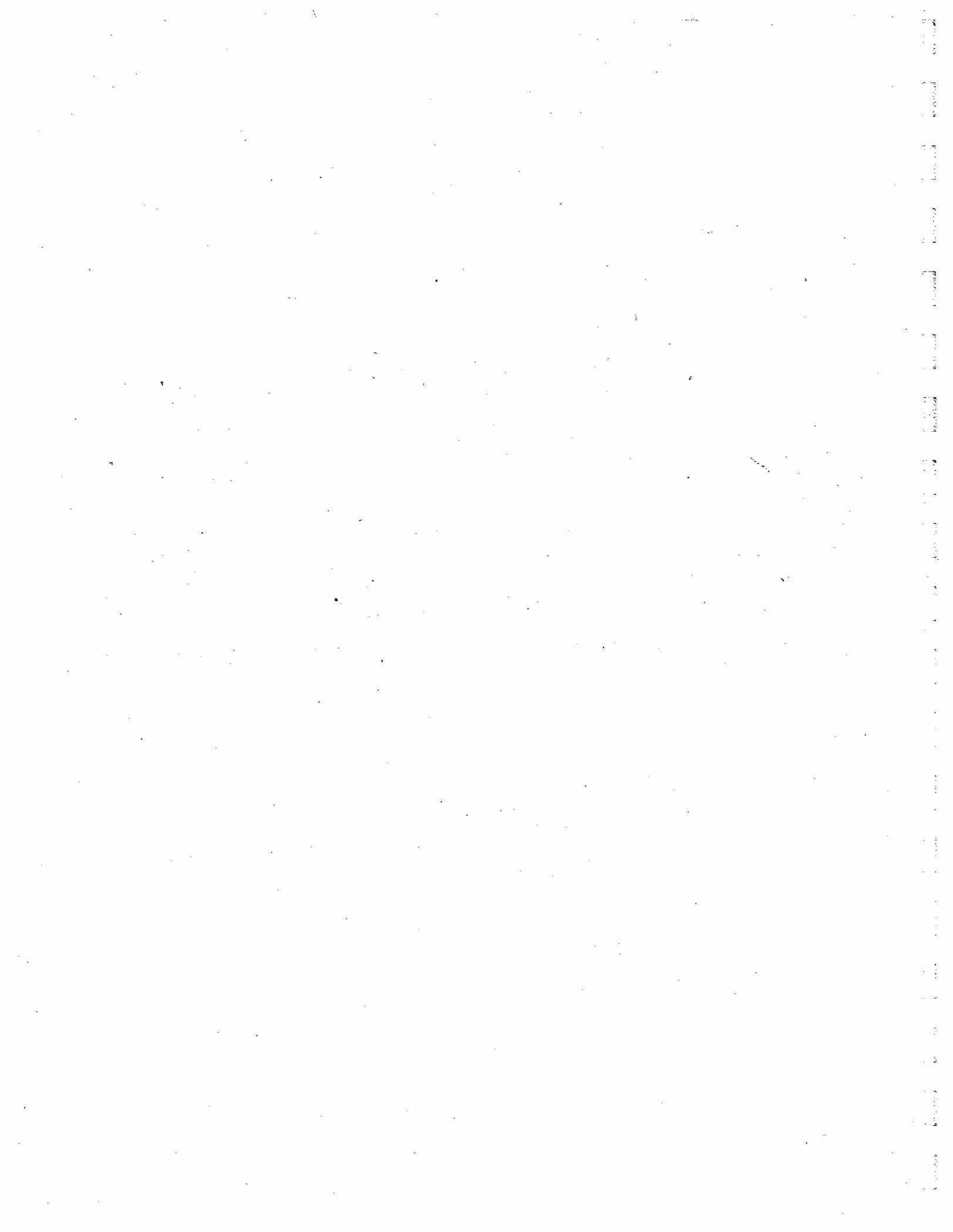
meetings, interviews, informal discussions and on-site observations have been used for this purpose.

With this in mind, the framework described above and presented in Figure 1 has been used as a guideline only, for the purposes of organizing data and analyzing the various development initiatives in a systematic and comparative manner.

**Framework: Principles of Sustainable Development**

**Figure 1**

Theme	Principles	Examples of Local Strategies
<b>Basic Human Needs</b>	<ul style="list-style-type: none"> <li>• alleviation of poverty</li> <li>• assurance of basic physical necessities (e.g. water, food, shelter)</li> <li>• accessible primary and secondary health care</li> </ul>	<ul style="list-style-type: none"> <li>• local infrastructure projects (e.g. water supply, sanitation)</li> <li>• rural/agricultural development (e.g. agroforestry, ecological agriculture)</li> <li>• housing and human settlements projects</li> <li>• credit programs</li> </ul>
<b>Basic Human Rights</b>	<ul style="list-style-type: none"> <li>• recourse to an open and just legal system</li> <li>• freedom from political repression</li> <li>• freedom of information, religion, expression, assembly</li> </ul>	<ul style="list-style-type: none"> <li>• grass roots political organizing</li> <li>• international pressure tactics</li> <li>• dismantling Northern support of illegitimate regimes</li> </ul>
<b>Self-Determination</b>	<ul style="list-style-type: none"> <li>• political processes that place decision making power at the level closest to the people affected by decisions</li> <li>• self-reliance</li> </ul>	<ul style="list-style-type: none"> <li>• grass roots political organizing</li> <li>• land reform</li> <li>• community development</li> <li>• local institution building</li> <li>• projects involving women, indigenous peoples, other groups</li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li>• shift of resources from North to South</li> <li>• shift of resources from present to future generations</li> <li>• redistribution of wealth and power</li> </ul>	<ul style="list-style-type: none"> <li>• grass roots political organizing</li> <li>• land reform</li> <li>• community co-ops</li> <li>• technology sharing and exchange</li> </ul>
<b>Economic Opportunity</b>	<ul style="list-style-type: none"> <li>• conditions supporting entrepreneurial activity and general economic expansion, including informal sector</li> <li>• conditions supporting economic diversity</li> <li>• access to resources, information and technologies</li> <li>• access to local and international markets</li> </ul>	<ul style="list-style-type: none"> <li>• appropriate technologies</li> <li>• credit programs</li> <li>• support for self-employment, informal sector</li> <li>• education, technology transfer, information exchange</li> <li>• local industry development and export marketing</li> </ul>
<b>Ecological Integrity</b>	<ul style="list-style-type: none"> <li>• human activities managed within the carrying capacities of ecosystems -- local, regional and global</li> <li>• integration of environmental costs into economic equations</li> <li>• integration of environmental considerations into economic and political decision making</li> </ul>	<ul style="list-style-type: none"> <li>• environmental research, information exchange</li> <li>• sustainable resource management (forest, soils, etc.)</li> <li>• waste reduction and recycling programs</li> <li>• energy conservation; renewable energy development</li> <li>• biosphere reserves</li> </ul>
<b>Social and Cultural Integrity</b>	<ul style="list-style-type: none"> <li>• freedom of cultural expression and development</li> <li>• linguistic rights</li> <li>• rights for ethnic minorities, women and youth</li> </ul>	<ul style="list-style-type: none"> <li>• cultural education programs</li> <li>• community development</li> <li>• preservation of indigenous homelands</li> </ul>



### 3.0 COMMUNITY PROFILES

As noted in section 1.0, this report focuses on five of the community-based development initiatives that were examined as part of a research program conducted in South East and Central Asia. These are:

- Alliance for Human Rights and Environment (Philippines)
- Ubud Tourism Development (Indonesia)
- Rancamanyar Ecoville (Indonesia)
- Tangail Community Development Program (Bangladesh)
- Chipko Andolan (India)

Descriptive summary profiles for each of the above programs are presented below. Each profile includes background information and a summary of "highlights" that are of particular relevance to sustainable development.

#### 3.1 Alliance for Human Rights and the Environment (Philippines)

*Kilusang Bayan Para Sa Karapatan at Kapaligiran (KBKK), or "Alliance for Human Rights and Environment," is an exceptionally broad-based alliance of interest groups in an area of the Philippines facing severe development challenges. Here the interrelationships among economic, environmental, social and political issues are clearly recognized. KBKK is beginning to*

*coordinate an integrated, community-based development program, involving constructive action on many diverse fronts.*

*Location:*

North Quezon Province, Philippines

*Facilitator:*

Centre for Environmental Concerns (CEC), Manila, Philippines

Kilusang Bayan Para Sa Karapatan at Kapaligiran (KBKK),  
Infanta, Quezon Province, Philippines

*Background:*

The political situation in the Philippines is extremely volatile. A war between government and leftist rebel forces is in progress, and Muslims in the south continue to fight for independence. The human rights situation has deteriorated and corruption is widespread. Meanwhile, politicians and a multitude of interest groups are mobilizing for national elections expected in 1992.

Filipinos face many difficult challenges, including an underdeveloped economy, one of the world's largest foreign debt loads (measured as a percentage of GNP), widespread poverty, extreme concentrations of land and resources in the hands of a small elite, high rates of unemployment and underemployment, and severe deforestation, industrial pollution and other environmental problems associated with virtually unbridled resource exploitation.

Not surprisingly, the level of political awareness and concern in the Philippines is extremely high, and grass roots political organizing is widespread. Some estimates place the number of non-governmental organizations (NGOs) and people's organizations (POs) at more than 30,000 and growing rapidly as the elections approach. Many Filipinos see these organizations as vehicles for protecting and promoting their interests, and alternatives to existing political institutions.

The Centre for Environmental Concerns grew out of this highly politicized situation in 1988. It is a spin-off from PAROD, the major national umbrella group for NGOs. Although CEC remains a small organization with a full

time staff of seven, its activities have expanded rapidly along with growing popular concern for the destruction of the natural environment. It is now serving as a national organization for the support of local environmental action groups throughout the country. One such group is KBKK, the "Alliance for Human Rights and the Environment" in Quezon Province.

### *Highlights:*

The activities of CEC have been concentrated in two areas:

- "Restoration Ecology Workshops" are 3-4 day training sessions, organized at the invitation of a community. Attendees come from a multi-sectoral range of groups and participate in program design and delivery. The workshops are motivational as well as informative, and the outcome is usually some form of community action aimed at environmental protection or restoration.
- "Environmental Investigation Missions" typically involve CEC staff members working in conjunction with local community groups to carry out independent fact-finding missions on specific environmental issues.

One of the first Restoration Ecology Workshops was held in Quezon Province in May, 1990. The workshop helped to solidify and define an agenda for the alliance of organizations that became KBKK.

KBKK, which represents an area covering three municipalities on Luzon Island and all of nearby Polilio Island, brings together a surprisingly broad and diverse range of community interests. Members include independent organizations promoting issues such as human rights, and representing groups such as farmers, fisher folk, women, youth, and indigenous tribes. As the name implies, the issues of human rights and environment are seen as closely related, and integral to overall effort to improve the well-being of the local population. A listing of some of KBKK's current activities reveals the scope of the Alliance's work:

- KBKK operates a human rights advocacy program, including representation, fact-finding, case documentation and education services. Recently, members have been campaigning against a Supreme Court decision authorizing warrantless arrest.
- A battle is being waged between community groups, led by KBKK, and commercial logging interests that are destroying large tracts of forest. The main offender is the Pristine Logging Corporation, owned by Cory Aquino's brother. KBKK has won a partial victory in that commercial

logging has been banned, with the exception of a small area. Pristine and other companies are, however, using a network of middlemen to circumvent the ban.

- KBKK has been working to stop illegal fishing methods, such as dynamiting, which are destroying coastal ecosystems. The organization is also trying to reduce over-fishing. In this regard, large scale commercial fishing has been banned in an area extending 12 km from the coast, but again, enforcement is difficult. KBKK is now lobbying to have members deputized to enforce the ban.
- KBKK, along with one of its members, the Tribal Council for Development (TCD) is working closely with indigenous peoples in the upland regions of Quezon Province to deliver programs in education and agriculture. The emphasis is on creating sustainable livelihoods.
- CALABARZON (from Cavite, Laguna, Batangas, Rizal and Quezon, the five provinces that include the industrialized heart of the Philippines) is a major development scheme promoted by the national government, based on large-scale industrialization and foreign financing. KBKK is concerned about the negative social, economic and ecological impacts of this scheme, and is introducing alternative development plans.
- Agriculture is generally underdeveloped in this area. Productivity is low, many farmers face economic difficulties, and an average of 20 or more typhoons per year add serious natural constraints. KBKK members are currently researching methods for improving productivity, incorporating natural fertilizers and pesticides, utilizing typhoon-resistant species, restoring depleted soils, and stabilizing upland slopes. A community demonstration farm is in operation.

It is still too early in the development of KBKK to draw clear conclusions about the effectiveness of the organization, its member groups, and national support provided by such groups as CEC. However, KBKK illustrates how a very broad base of community interests can be linked together and mobilized toward mutually supportive goals.

### 3.2 Ubud Tourism Development (Indonesia)

*The Village of Ubud lies in the heart of Bali, a lush tropical Island that is the centre of a large and rapidly growing tourist industry. Ubud has controlled tourism development in a manner that respects local culture and, in doing so, has created a thriving local industry that is more compatible with the local ecology and way of life than conventional tourist developments found elsewhere on the Island.*

*Location:*

Ubud, Bali, Indonesia

*Facilitator (1980-90):*

Bina Wisata ("Tourism Development"), Ubud, Bali, Indonesia

*Background:*

The Island of Bali is one of the world's premier tourist destinations. A pleasant tropical climate, white sand beaches, outstanding scenery, and a vibrant and highly artistic local culture have been attracting foreign tourists for several decades.

Tourism in Bali expanded rapidly during the 1980s, reflecting worldwide growth in the industry and the encouragement of a national government that sees the Island as an important source of foreign exchange. A growing number of observers, including Balinese residents, local government officials, business people in the tourist sector, and foreign visitors, feel that the Island has now arrived at a critical "crossroads." A variety of social and environmental problems have been identified and attributed, at least in part, to rapid and in many ways uncontrolled tourism development. Examples include:

- coastal erosion and the destruction of coral reefs and mangrove forests caused by large-scale hotel development;
- water pollution from untreated sewage, again from hotels and associated development;

- social tensions arising from the integration of migrant construction labourers;
- increased alcoholism and drug abuse, particularly among the youth;
- air pollution and public safety hazards as a result of growing vehicular traffic;
- solid waste and litter.

The current development path, if continued unchecked, threatens to destroy not only the quality of life of the local population, but also the very attributes that led to tourism development in the first place.

Given this general context, it is important to recognize that the type and quality of development around the Island varies widely. Most of the tourism is concentrated along the Island's south coast. Here two different but equally problematic forms of development are found. One takes the form of enclaves of star-grade beach hotels catering to up-market tourists (e.g. Nusa Dua, Sanur Beach), resulting in problems such as pollution and the destruction of fragile coastal ecosystems. The other includes the noisy and crowded clusters of shops, guest houses, hotels, bars and restaurants that have grown up randomly to service most of the remaining tourist market (e.g. Legian Beach and Kuta Beach).

On the other hand, there are dozens of small villages, particularly those located in the central highlands of Bali, that have been virtually untouched by tourism, and maintain an agriculture-based lifestyle that has remained essentially unchanged for centuries.

Somewhere in the middle of these two extremes lies the Village of Ubud, a community of about 10,000 people located in the south central highlands of Bali. Ubud is definitely a tourist centre, and tourists are the main source of local income, but here development has taken a very different and potentially more sustainable form.

#### *Highlights:*

According to several Ubud residents interviewed during the course of this research, many of the concerns and conflicts related to tourism emerged in the late 1970s and early 1980s. Village young people, for example, began to discard traditional Balinese dress and customs in favour of the tourists' Western ways.

In response, the community, led by a number of long-time residents who were also business people involved in the tourist sector, began to organize to ensure that tourism developed in a manner compatible with local norms, customs and religious practices. A non-profit organization, Bina Wisata ("Tourism Development") was formed as a vehicle for community programs, which included an information/education campaign aimed at foreign visitors, assistance and advice to local businesses, and support for cultural activities such as art, dance, music. Bina Wisata functioned for 10 years (1980-90), and is one reason why, today, many indicators of a tourist industry that has been largely controlled by and integrated into the local community are evident:

- The Balinese retain ownership of most tourist businesses.
- Virtually all buildings in the community display unique Balinese architecture and landscaping.
- Balinese-produced artwork, clothing and crafts dominate the shelves of tourist shops.
- A community of local artisans flourishes in and around the Village, and attracts many local youth.
- The traditions of Bali's unique brand of Hinduism are still widely practiced in frequent public ceremonies and private rituals.
- Tourists conform to local custom by, for example, wearing traditional Balinese dress whenever entering a temple.

Many Ubud residents argue that the tourist economy has strengthened local culture by providing funds that are in turn pumped back into the arts, temples and religious ceremonies that are central to the Balinese way of life.

To date, at least, Ubud's development has resulted in environmental and social impacts which are far more manageable than those in the south. However, there are signs that, even in Ubud, the pressures of tourism may ultimately prove too powerful to control. The community has grown dramatically in the past two years, traffic is building rapidly, at least one hotel that is much larger than the common guest houses is under construction, and pressure from non-Balinese investors to take part in development is increasing. Most observers agree that the Island as a whole will face unprecedented rates of tourism expansion in the 1990s.

### 3.3 Rancamanyar Ecoville (Indonesia)

*Rancamanyar is a community of families whose livelihoods depend primarily on scavenging materials from the City of Bandung solid waste stream. The community illustrates principles of sustainable development in an urban and suburban setting, and is a fundamental part of the broader solid waste management innovations promoted by CES.*

*Location:*

Bandung, West Java, Indonesia

*Facilitator:*

Centre for Environmental Studies (CES),  
Institute of Technology Bandung (ITB), Bandung, West Java, Indonesia

*Background:*

The City of Bandung (metropolitan population currently estimated at about 3 million) faces many of the issues found commonly in large cities of the developing world. One of these is solid waste management. The costs, logistical challenges and environmental risks associated with managing the burgeoning volumes solid waste are daunting, but must be resolved if urban development is to proceed in a sustainable manner.

As in most cities of the developing world, scavengers represent a vital part of solid waste management system, although they function as an informal, underground economy. Scavengers are typically social outcasts, squatting in informal settlements, selling materials retrieved from the waste stream for marginal incomes, and harassed constantly by public officials.

CES has been working with the scavenger community in Bandung since the early 1980s in a variety of efforts to improve economic and social well-being, while at the same time addressing the solid waste management problem. Initial efforts focussed on a squatter community known as Jati Dua, which by 1987 had evolved into a self reliant community of some 88 families practicing a variety of income generating activities, from intensive urban agriculture to recycling and organic waste composting. That year the community was levelled by the municipality to make way for a parking lot, and the members

were dispersed. A core group, however, worked with CES to secure a new location, which became known as Rancamanyar.

*Highlights:*

At the time of field visits during December, 1990, Rancamanyar was home to fifteen families, most of whom had lived in Jati Dua. With the assistance of an architect brought in by CES, community members built their own housing, consisting of comfortable, low cost row units constructed from local materials. The members own and operate a kiln for brick making. Although most of the male members still scavenge in Bandung, the residents have launched a variety of successful small business initiatives, cooperatively and as individuals, using loans from the community cooperative:

- A large plot of common land is farmed collectively and most of the produce is marketed locally.
- Virtually every family maintains a highly productive fruit and vegetable garden.
- Livestock is raised on the compound.
- Several members are pursuing successful business ventures in the informal sector, such as food and snack sales.

Future plans include the construction of additional housing and the continued recruitment of new families. An existing bamboo shed, which is used as a night school and mosque, will soon be replaced by permanent structures.

Rancamanyar is one of several closely related efforts to integrate the scavenger community into Bandung society, and into the formal Bandung waste management system. Members of CES promote a vision in which a decentralized network of "resource recovery centres," operated primarily by scavengers, becomes the focal point for recycling and composting, which in turn become the activities for processing the bulk of urban solid waste. A number of tests and research programs are now underway to define the technologies and methods required. One example is a composting project at the Leuwigaga municipal dump site, where a low-cost, low-technology approach is generating compost product in a rapid, 44-day cycle. Other research is focussing on appropriate technologies for recycling paper and plastic, and on the issues related to marketing materials recovered from solid waste.

### 3.4 Tangail Community Development Program (Bangladesh)

*Tangail District is an area of north central Bangladesh that is traditionally renowned for its weavers. The area has, however, suffered severe economic problems due to the decline of the weaving industry and the devastation of the agricultural sector by major floods in 1988. Countering these trends is a diversified community development effort, building upon early successes in the weaving industry and now extending to ecological agriculture.*

*Location:*

Tangail District, Bangladesh

*Facilitator:*

UBINIG ("Policy Research for Development Alternatives"),  
Dhaka, Bangladesh

*Background:*

The chronic development problems faced by the people of Bangladesh are well-documented. It is a country with one of the lowest per capita income levels and highest infant mortality rates in the world.

The Tangail district in north-central Bangladesh faces a particular set of development challenges within this context. Traditionally, the major industry is weaving; the weavers of Tangail, and the saris that they produce are famous throughout South Asia.

On arrival in Tangail, in 1986, UBINIG found that the weaving industry was in a serious state of decline, and that this was responsible in part for widespread poverty in the area. Locally, weavers were exploited by the money-lenders, known as *muhajin*, who were providing badly-needed credit at extremely high interest rates, in exchange for exclusive purchasing rights at extremely low prices. Producers had no access to the technologies or market intelligence required to improve competitiveness. At the national level, economic policies were restricting export markets and constraining the overall development of the weaving industry. Bangladesh yarn mills are heavily taxed, and have no capacity to produce fine yarns at competitive prices. As a result, the weavers are forced to purchase imported Indian yarns,

which they cannot convert into saris at competitive prices for resale back into India, the major market. India also imposes heavy taxes on imports.

*Highlights:*

The initial research phase of UBINIG's work in Tangail lasted about six months. The researchers studied the operations of the weaving industry, including economics and the role of women and children. After consultations with the villagers, UBINIG began assisting the weavers in several ways:

- by providing credit for the purchase of materials and other essentials at a rate of 5% (the interest is retained in a savings account for use by community members);
- by serving as an alternate "route" from producer to market, thereby avoiding the *muhajin*. UBINIG purchases any saris that the weavers wish to sell, at prices that ensure that the largest possible portion of total sari revenue remains at the producer level.
- by providing technical assistance for minimizing production costs, improving productivity, incorporating new designs, and modifying or repairing equipment;
- by offering marketing support. UBINIG maintains a retail outlet in Dhaka for domestically produced saris, operates a consumer cooperative, and monitors consumer feedback to improve product quality and designs.
- by helping to upgrade loom technology. UBINIG has researched looms, helped to source a loom that will cut costs and enable a threefold increase in productivity, and is now providing credit to facilitate the purchase of the new systems.
- by providing technical training on an informal basis, and, in the near future, through a permanent weaving centre.

These initiatives are now underway in 22 area villages. And as these local efforts have proceeded, UBINIG members in Dhaka have been lobbying for changes in government policies and regulations which will remove restrictions to industry expansion and development.

Based on successful efforts with the local weaving industry, villagers have been addressing other needs, such as education, health and water supply. A village school system, adapted to the needs of weaver families, is now in

operation. UBINIG provides medicines on a 50/50 cost sharing basis. UBINIG has also facilitated the purchase and installation of tube wells by villagers, who are now organized in groups to maintain and supervise the wells. In addition to the credit program mentioned above, the villagers have also organized themselves into savings groups to pool their resources for emergency or business development purposes.

Recently, efforts have focussed on the agricultural sector, which was badly damaged by major floods in 1988. Again, UBINIG has been supporting agricultural improvement through the provision of low-cost credit. In addition, the organization has recently purchased a 3 acre plot of prime agricultural land which will be used to demonstrate and refine ecological agriculture methods. UBINIG has been conducting in depth research to develop a plan for the farm, based on methods which require no chemical inputs of any kind, and therefore avoid the pollution, soil depletion and declining outputs that chemical intensive methods have caused throughout Bangladesh. The farm will be operated cooperatively by 10 families, and proceeds will be shared between the co-op and UBINIG.

### 3.5 Chipko Andolan (India)

*Chipko is well-known as a grass roots movement that, since the early 1970s, has been effective in protecting the forests of the Garhwal Himalaya. Today, Chipko remains a potent political force. It also functions as a large scale afforestation program, supports a range of community development needs from education to agriculture, and guides an extensive watershed restoration and management effort, all in a manner that is firmly grounded in the principles self-reliant community action.*

*Location:*

Garhwal Hills, Uttar Pradesh, India

*Facilitator:*

Dasholi Gram Swarajya Mandal (DGSM), Gopeshwar, Uttar Pradesh, India

*Background:*

The Garhwal region of northern India is located in the foothills of the Himalaya. It is an extremely rugged, mountainous area that forms the headwaters of the Ganga-Yamuna River system.

The Garhwal has been under development pressures for several decades. In the 1960s, major road building programs linked the area to the heavily populated plains of central India, and opened it up to extensive commercial logging. Most of the hills were left barren, exposing the slopes to rapid erosion, and forcing village women to venture further and further each day for fuel wood and fodder. In 1970 major floods along the Alaknanda River (a tributary of the Ganges), caused widespread destruction of villages, bridges, roads and farms, and left many people dead. These floods, along with several major landslides later that decade, led to an increased awareness of the vital importance of trees in stabilizing slopes, as well as the failure of existing forest management practices.

Chipko was born in 1973 when local villagers were refused permission by the state forest authority to cut 12 ash trees in order to make agricultural implements, a use of the forest which they considered a traditional right. At the same time, permission was granted to a sporting goods manufacturing company to cut 32 ash trees from that same forest to make tennis rackets. About 100 people marched out to the forest, singing songs, beating drums, and threatening to "hug the trees" to protect them from the axes. Eventually, the commercial loggers relented.

This was the first of several rallies and tree hugging campaigns, primarily throughout the mid and late 1970s as Chipko grew into a widespread movement to maintain the forests and stop the practice of logging by outside contractors on government issued concessions. The movement has succeeded in altering forest management practices permanently by making it virtually impossible for government or business interests to make decisions regarding forest use without involving area villagers.

*Highlights:*

Today, Chipko is an established as a grass roots political force that responds quickly and decisively through non-violent public protest to any threat to the forest. Chipko is also a loosely structured resource management and

community development network. Since the threat of mass demonstrations is usually sufficient to deter illegal forest destruction, much of the work of Chipko focuses on development activities such as afforestation, agroforestry, income generation, and education.

The Chipko movement does not conform to any Western model of development program or organization. It has no formal membership, no set strategy, and no financial support. There is no large network of staff, vehicles and offices.

Dasholi Gram Swarajya Mandal (DGSM) ("Dasholi Society for Village Self Rule") is the organization that serves as the primary catalyst and coordinator of the Chipko movement. Its leader is Chandi Prasad Bhatt. DGSM is a small organization, with a full-time staff of 5 or 6 people based in Gopeshwar. It becomes involved with villages only on when invited; upon request Mr. Bhatt or one of his colleagues will participate in meetings during which the needs of the villagers are discussed, ideas are exchanged, and projects are identified.

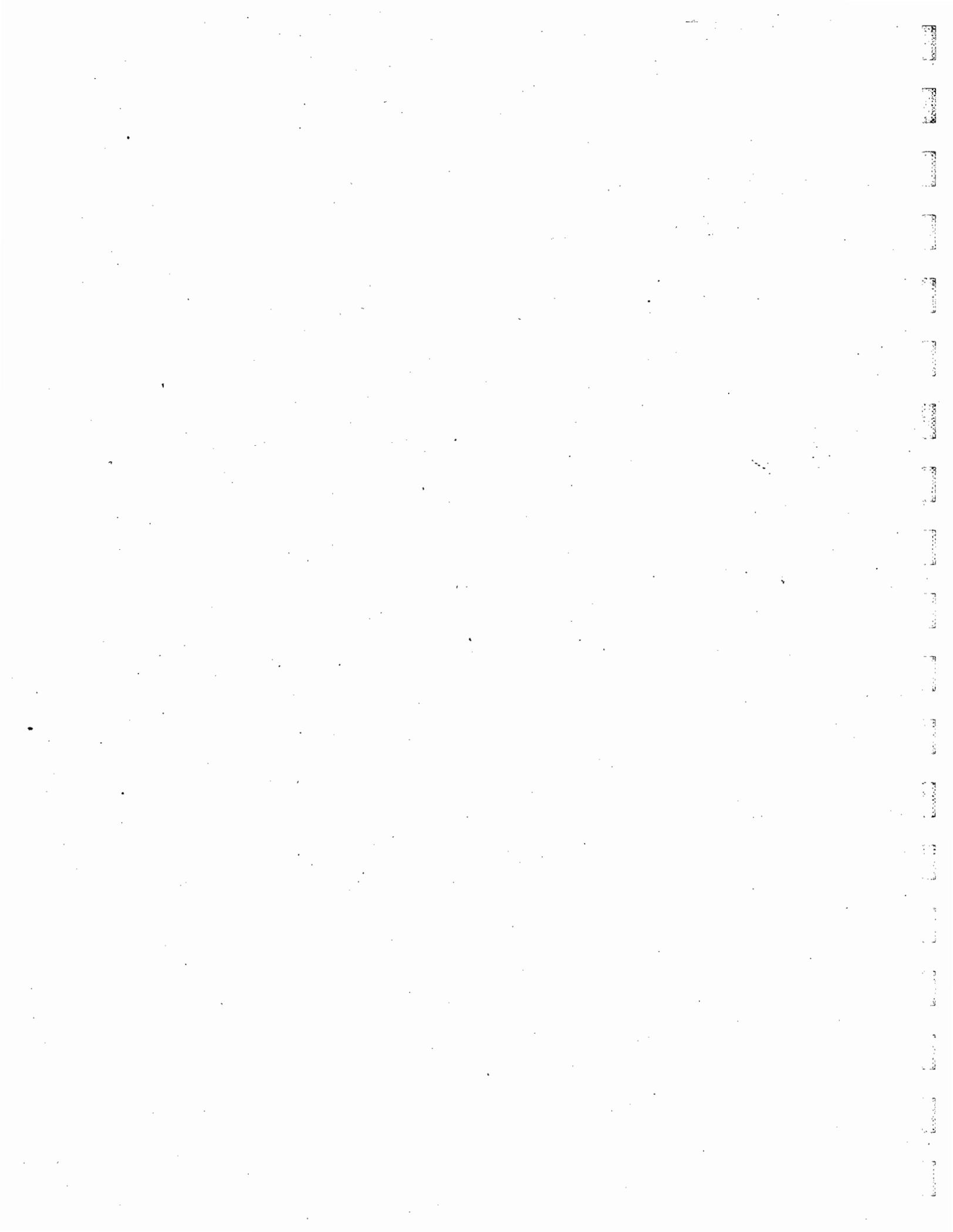
At present, about 50 villages are involved in the Chipko movement in some way. Most are practicing afforestation and intensive forest management, while at the same time working to address other needs such as education and health care. Village women's groups, known as *Mahila Mandal Dal*, assume a leadership role. Most protect and manage forest areas as a communal resource, carefully controlling access and ensuring that tree planting and maintenance proceeds. Tree planting and agroforestry on private lands is also encouraged and supported.

Each year DGSM also facilitates 4 to 6 "eco-development camps," where large numbers of people come together to plant trees, learn about the ecology of the area, sing songs and share ideas. These serve as a mechanism for disseminating information and motivating the growing numbers of people involved. DGSM also maintains a tree nursery, which is gradually expanding into an "ecology centre" with facilities for training and research.

During the month of January, 1991, research was conducted in four villages involved in the Chipko movement -- Papariyana, Tangsha, Hyuna and Bachher. In each case, evidence of the impact of Chipko is readily apparent. Each village is afforesting large parcels of communal lands which were formerly wastelands and are now in various stage of rehabilitation. The survival rates of saplings are as high as 95 per cent. Large tracts of existing forest are protected by vigilant *Mahila Mandal Dal*. Many village women recall how the plantations have had a direct impact on their lives by reducing the daily search for fuel wood and fodder by several hours. The tree planting is providing the basis for overall improvements in village welfare by solving

biomass shortages, stabilizing slopes for agriculture, and yielding revenues from the sale of fruit and nuts.

Most of the participating villages are located on small micro-watersheds draining into the Alaknanda River or one of its tributaries. The afforestation work is serving to stabilize these areas, thereby reducing soil erosion and improving water retention. In many cases, the villagers have built embankments and carefully restored particularly sensitive areas. The combined impact of all 50 villages is the beginning of a large scale restoration and development initiative for the Alaknanda watershed as a whole.



#### 4.0 ANALYSIS PART I: PRINCIPLES OF SUSTAINABLE DEVELOPMENT

Each of the five community-based development initiatives profiled in the previous section has been evaluated according to generic principles of sustainable development. These principles have been organized in the form of a matrix, which was discussed and presented in section 2.0 (see Figure 1).

As shown in this matrix, the principles of sustainable development are grouped into seven categories, or theme areas:

- Basic Human Needs
- Basic Human Rights
- Self-Determination
- Equity
- Economic Opportunity
- Ecological Integrity
- Social and Cultural Integrity

The analysis that follows (see Figure 2) is a review of the five initiatives to determine how each of these theme is addressed in each case.

It is important to emphasize that this analysis is qualitative. No attempt is made to "rank" communities in terms of sustainability or to otherwise impose an artificial measure of sustainable development performance. Rather, the intent is to show how each community is responding to the commonly cited "ingredients" of sustainable development. Each community has both strengths and weaknesses when evaluated on this basis, and each one represents an attempt at community-based sustainable development that responds to the constraints and opportunities presented by local circumstances.

Evaluation of Communities Based on Principles of Sustainable Development

Figure 2

Theme	<i>Alliance for Human Rights and Environment (Philippines)</i>	<i>Ubud Tourism Development (Indonesia)</i>
Basic Human Needs	<ul style="list-style-type: none"> <li>• Methods to increase farm productivity (e.g. agroforestry, typhoon resistant species) are under development. Extension services and a demonstration farm are operating.</li> <li>• KBKK is fighting to ensure access to resources by local fisherfolk, indigenous tribes and other resource-dependent groups. Some policy changes have resulted, but enforcement remains a problem.</li> </ul>	<ul style="list-style-type: none"> <li>• No extreme poverty is evident in and around Ubud village, although there are clearly some marginal businesses and jobless people who come from other areas in search of tourist income.</li> <li>• Certain practices linked to religious tradition work to prevent poverty at the village level (e.g. local businesses assume responsibility to ensure poor in the community are employed).</li> </ul>
Basic Human Rights	<ul style="list-style-type: none"> <li>• Human rights issues are a top priority, and the integration of human rights and environmental issues is explicitly recognized.</li> <li>• Specific issues addressed include warrantless arrest and the rights of indigenous peoples to traditional lands and forests. Access to resources for livelihood is considered a basic right.</li> <li>• KBKK provides a human rights advocacy service.</li> </ul>	<ul style="list-style-type: none"> <li>• Although organizing, assembly and expression are tightly controlled in Indonesia, this has not had a serious impact on activities in Ubud, which focus mainly on tourism development.</li> </ul>
Self Determination	<ul style="list-style-type: none"> <li>• KBKK works within a highly centralized political system to place decision making in the hands of those affected.</li> <li>• Conscientization programs, tribal education programs, and regular seminars/symposia are designed to give people capability to acquire greater self-determination.</li> <li>• Some positive impact has been achieved in the form of policy changes restricting resource exploitation by outside interests.</li> </ul>	<ul style="list-style-type: none"> <li>• Ubud has managed to exert a considerable degree of community control over tourist industry development. The result is a community based on relatively small, Balinese owned and operated businesses and a strong, highly visible culture.</li> <li>• Some community members feel, however, that the pace of change is increasing too rapidly and that development pressures may ultimately become too powerful to control at the village level.</li> </ul>
Equity	<ul style="list-style-type: none"> <li>• The alliance is grounded in belief that a more equitable distribution of resources is essential for development.</li> <li>• Efforts directed at resource management (see above) are designed to address existing inequities.</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism development in Ubud promotes equity to the extent that resources generated by the tourist industry are retained in Bali, rather than drawn out of the Island by Javanese and foreign investors.</li> </ul>
Economic Opportunity	<ul style="list-style-type: none"> <li>• Specific efforts to improve economic opportunities include assistance to fisherfolk and programs for indigenous peoples.</li> <li>• In order to improve long term economic opportunity for the local population, KBKK advocates decentralized economic development alternatives in favour of mega-projects that will to drain resources from hinterland to Manila and abroad (e.g. CALABARZON).</li> </ul>	<ul style="list-style-type: none"> <li>• The main focus of community development in Ubud is promotion of the tourist industry, and the development of a thriving industry based on the production of artwork for sale to tourists and export abroad. This has been highly successful.</li> <li>• There are some concerns that the community may not be sufficiently diversified for long term economic sustainability.</li> </ul>
Ecological Integrity	<ul style="list-style-type: none"> <li>• The local area has suffered extensive ecological damage, and restoration is a top priority.</li> <li>• Training and conscientization on ecological principles and practices has been conducted. Alliance members demonstrate a very high degree of understanding environment/development relationships.</li> <li>• Resource management strategies advocated by KBKK incorporate ecological principles.</li> </ul>	<ul style="list-style-type: none"> <li>• Many of the environmental impacts associated with large scale hotel and infrastructure development have been avoided, although there is evidence of some local environmental stress (e.g. solid waste and litter).</li> <li>• Balinese religious and cultural traditions, which are very powerful in Ubud, include the incorporation of ecological considerations into architecture, agriculture, education and other activities.</li> </ul>
Social and Cultural Integrity	<ul style="list-style-type: none"> <li>• Work with indigenous tribes includes support in retaining social and cultural integrity in view of rapid change.</li> <li>• KBKK and other grass roots groups resist established that promote continued U.S. domination.</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism in Ubud is based largely on the promotion of a rich and artistic culture. Most residents argue that tourist income has strengthened local culture and community identity. Culture is also promoted through schools and other community networks.</li> </ul>

Evaluation of Communities Based on Principles of Sustainable Development

Figure 2 (cont'd)

Theme	<i>Rancamanyar Ecoville (Indonesia)</i>	<i>Tangail Integrated Community Development (Bangladesh)</i>
Basic Human Needs	<ul style="list-style-type: none"> <li>The scavenger community is traditionally an "outsider" group, on the margins of society and excluded from access to services such as health care and education. The project has established community status, along with access to these services.</li> <li>A breakthrough for the community was the establishment of security of land tenure in 1987. Since then, the community has made significant progress in providing housing, a safe water supply, and basic food requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Poverty alleviation has been addressed directly through programs to revive the local weaving industry, provide credit, and rehabilitate agriculture after severe flood damage in 1988.</li> <li>Basic health care services have been put in place.</li> <li>A tube well program managed by community members ensures a clean water supply.</li> <li>Education programs emphasize health care, hygiene and nutrition, as well as practical aspects of weaving and agriculture.</li> </ul>
Basic Human Rights	<ul style="list-style-type: none"> <li>Basic rights that have been obtained by community members include security of land tenure, education, health care and other services available to recognized citizens.</li> <li>Despite major progress, the scavengers still fight basic prejudices held by the community at large, including public institutions.</li> </ul>	<ul style="list-style-type: none"> <li>Women have been identified as leaders of weaving groups, in part to help eliminate instances of exploitation.</li> </ul>
Self Determination	<ul style="list-style-type: none"> <li>Most of the tactics used in Rancamanyar have been firmly grounded in principles of self-reliance. The community has reduced dependency on outside groups through self-sufficient agriculture, self-produced housing, small-scale owner operated businesses, and other techniques.</li> <li>One key to self reliance has been the community co-operative, which serves as a legitimate organizational structure and a source of credit for communal and individual ventures.</li> </ul>	<ul style="list-style-type: none"> <li>Savings and credit programs, training and education, and efforts to secure new technology are all in operation to encourage self reliance at the family, group and community levels.</li> <li>Tangail is part of a larger effort by UBINIG to encourage the development of traditional economic sectors, and the implementation of rural industrialization strategies that promote national self-reliance and reduce dependency on foreign investment and technology.</li> </ul>
Equity	<ul style="list-style-type: none"> <li>The evolution of Rancamanyar represents a successful transition of marginalized community into a more mainstream status within the society at large.</li> </ul>	<ul style="list-style-type: none"> <li>Work in the weaving sector has attempted to redress inequities by maximizing earnings at the producer level, which had been heavily exploited by downstream interests.</li> </ul>
Economic Opportunity	<ul style="list-style-type: none"> <li>The development of economic opportunities have focused on recycling and composting, service businesses in the informal sector, and agriculture.</li> <li>The community co-op mentioned above, through the provision of credit, has been instrumental in this process.</li> </ul>	<ul style="list-style-type: none"> <li>The provision of low cost credit has been a breakthrough for income generation opportunities in weaving and agriculture.</li> <li>Support provided to the community in the form of new technology, training, market access and market intelligence has been effective in increasing the earning potential of weavers.</li> </ul>
Ecological Integrity	<ul style="list-style-type: none"> <li>At a community level, the methods applied for agriculture, waste management and water supply are ecologically sound and represent useful techniques for application in a suburban setting.</li> <li>Rancamanyar and the overall development of the scavenger community is part of a broader effort to reform urban waste management systems.</li> </ul>	<ul style="list-style-type: none"> <li>A major component of the program is the establishment of a demonstration farm for ecological agriculture, and the dissemination of these methods to area farmers. The farm has been purchased and is now under development.</li> <li>Rural industrialization has many potential long term ecological benefits, relative to urban-based strategies.</li> </ul>
Social and Cultural Integrity	<ul style="list-style-type: none"> <li>Securing tenure and recognized status for the community has had many social side benefits (e.g. community pride, confidence). Strong community bonds, cooperative participation and mutual support, and shared values and identity are readily evident at Rancamanyar.</li> </ul>	<ul style="list-style-type: none"> <li>Programs are based on the needs defined by community members, and appear to be well-integrated into established community norms and practices.</li> </ul>

Figure 2 (cont'd)

Evaluation of Communities Based on Principles of Sustainable Development	
Theme	<i>Chipko Andolan (India)</i>
Basic Human Needs	<ul style="list-style-type: none"> <li>• Chipko has caused extensive reforestation, greater access to forests by the resident population, and improved forest management; the forests are, in turn, essential for the provision of basic needs as a source of food, fodder, fuel wood and building materials. They also retain water and stabilize slopes for agriculture.</li> <li>• Specific efforts to address health care, food supply, nutrition and water supply are now operating in many participating villages.</li> </ul>
Basic Human Rights	<ul style="list-style-type: none"> <li>• Village women, traditionally responsible for fuel wood and fodder, have organized into womens' groups and assumed leadership within the movement and their communities. As the forests have been rehabilitated, their daily workload has been reduced.</li> <li>• Chipko has been successful in establishing and protecting the rights of community members to access forest resources.</li> </ul>
Self Determination	<ul style="list-style-type: none"> <li>• A key principle underlying Chipko is that decisions regarding forest management must involve participation by those living in and around the forest. The movement has had a significant influence on forest management policy and administration, in that this principle is now widely practiced.</li> <li>• Village womens' groups serve as a local decision making structure and have secured considerable influence within the community and in relation to local and state governments.</li> </ul>
Equity	<ul style="list-style-type: none"> <li>• Chipko has made substantive progress in improving the equitability of resource distribution by forcing government forest authorities to recognize the rights of the population to this critical resource.</li> <li>• At the village level, womens' groups are effective in ensuring equitable distribution of communal resources among families.</li> </ul>
Economic Opportunity	<ul style="list-style-type: none"> <li>• The main thrust of the Chipko movement has been biomass management as a survival strategy. This is now being extended to include the development of income generation opportunities in agriculture and marketable forest products.</li> </ul>
Ecological Integrity	<ul style="list-style-type: none"> <li>• Chipko participants, particularly the women, demonstrate a very high degree of understanding of ecological principles and practice.</li> <li>• Ongoing ecology education efforts, including eco-development camps, demonstrations and informal discussion have been encouraging ecologically sound development.</li> <li>• Significant ecosystem restoration has been achieved on a micro-watershed and watershed basis.</li> </ul>
Social and Cultural Integrity	<ul style="list-style-type: none"> <li>• Women's groups, youth groups and eco-development camps are mechanisms that have contributed directly to strengthening community bonds, and building confidence and identity.</li> <li>• The movement is responsive to felt needs at the village level.</li> </ul>

## 5.0 ANALYSIS PART II: SUCCESS FACTORS

The analysis presented in the previous section suggests clearly that all of the development initiatives examined demonstrate at least some of the principles of sustainable development in practice. All are successful in their own way: the lives of community members are being improved, processes of change have been set in motion, and the elusive balances between environment and development are being sought after with with skill, sensitivity and participation.

The purpose of the analysis that follows is to explore in greater depth the factors that underlie success.

Without question, each of the communities studied is unique. Each community demonstrates a distinct set of development initiatives, applied within a special set of circumstances. However, despite this diversity, there are a number of general considerations that are common to all, or most, of the cases. These are themes that emerged persistently throughout the course of research; they were identified repeatedly as essential elements of community development strategies, and reasons for success.

These themes are identified and described below as *success factors* and accompanied by specific examples from the case study communities. These factors suggest the strategies and tactics that can be supported, and possibly replicated, in ongoing efforts to encourage sustainable development.

## 5.1 Effective Organization at the Community Level

A high level of organizational activity was observed in all of the communities investigated. In most cases, virtually every community member participates in the process of development in some way, through a variety of formal and informal organizations.

These community level organizations appear to serve at least three distinct functions:

First, organization is considered necessary *to change decision making systems and processes* so that community members have more control over their own lives. In most cases, the communities observed exist well outside of established systems for the distribution of wealth and power, and they use organizations to try to change this *status quo*. Often organizations are formed in reaction to the exploitation of the community concerned, and then remain in place to sustain the pressure for decision making reform.

Chipko Andolan provides the most well developed example. The community in this case consists of the people of India's Garhwal Hills, who live in and around the forests on which they depend for their livelihoods. When these forests were exploited by outside logging contractors on government concessions, the community organized in massive demonstrations of passive resistance. The tactic worked, and changes in forest management policy and administration have since been implemented. The local community is now heavily involved in forest management decisions as a credible participant, in part because of the latent power of mass organization.

In the Philippines, KBKK is working toward a similar goal in a different manner. Here the community has formed an alliance of interest groups which is too broad, at least in some cases, for the established decision making elite to ignore or stifle. As noted earlier in section 2.0, the alliance has had an impact on forest and fishery management, and is becoming a recognized player in local development decisions.

Second, local organizations are used as vehicles *for implementing specific projects and programs*. The type of organization used for this purpose varies widely; many different organizational forms were observed in the five communities profiled for this report.

In the Tangail Community Development Project in Bangladesh, for example, a series of small, task-oriented groups are in operation. There are several weaving groups, each organized around a loom operator, as well as groups for managing agriculture, credit, savings accounts, and tube well installation and

maintenance. The key organization in Rancamanyar is the community co-operative, which builds and manages housing, administers loans for small business ventures, and maintains the communal property. Within the Chipko movement, village level womens' groups have evolved to handle the critical task of forest management and, in some cases, additional development projects in areas such as health and education. The alliance approach used by KBKK lends itself to program delivery, since each of the participating interest groups takes on projects in its own area, within a loosely coordinated program of change.

Third, local organizations are used *to strengthen and promote social and cultural activities*. This is happening in each community to varying degrees, and in each case the side-benefits include stronger community ties, and a sense of community identity and confidence that contributes to all aspects of development. Again, there are many relevant examples. Bina Wisata in Ubud made many direct contributions to local groups of musicians, artists and traditional dancers, while constantly promoting the importance of cultural integrity to residents and visitors. Rancamanyar's community co-op is now helping to build a mosque, which is considered by residents to be a project of very high priority. The eco-development camps that have been major events in the evolution of the Chipko movement have always included a strong emphasis on music, informal discussion and community solidarity.

There is no doubt an endless variety of organizational forms and structures. What all of the communities share, however, is an ability to organize in a manner that enhances participation in decision making, project implementation and social/cultural expression. Evidence that these organizational efforts are productive is found in the fact, with few exceptions, community members view them as worthy of active, voluntary participation as they get on with the task of improving their lives.

In addition, these organizations are often remarkably lean and efficient; they make the most of extremely limited resources. Again, Chipko provides a case in point since, even today, the movement is coordinated by a handful of local people with no cars, no fax machines, and no funding from external sources. Organizations in most cases have been set up in a pragmatic and expedient manner in response to clear development challenges. They become only as large as these challenges demand.

## 5.2 Mutually-Supportive Partnerships

Local organizations often benefit greatly through innovative partnerships with groups and individuals at all levels -- local, regional, national and international. Forming, maintaining and encouraging these partnerships is usually a key role played by the facilitator group in each case.

KBKK provides perhaps the most intricate example of partnerships. As an alliance of interest groups it is now participating with local government in development decisions. Some government officials are now members of the alliance. In addition, the alliance has strong linkages at the national level. The Centre for Environmental Concerns (CEC) organized the multi-stakeholder workshop that helped to fuse the alliance and continues to provide support. CEC is linked into the people's movement in the Philippines through connections to the Centre for People's Development (CPD) and other groups. The movement is, in turn, supported by some international agencies.

The close partnership between Rancamanyar community members and the Centre for Environmental Studies (CES) at ITB has been crucial to that community's evolution. CES has mediated between the scavengers and City officials on many occasions and may be on the verge of helping to forge an unprecedented alliance between the formal and informal sectors of urban solid waste management.

Other examples demonstrate further partnership possibilities. UBINIG has developed a number of interesting relationships, including a joint research venture involving a Japanese specialist in ecological agriculture that has been of considerable value in planning Tangail's demonstration farm. UBINIG is first and foremost a policy research organization that draws from many international contacts in support of local projects.

The Chipko movement has remained independent of national or international donors of any kind. Nonetheless, local level partnerships have been useful. In a village visited during the course of this research, for example, one of the leaders of the womens' group is coincidentally the head of administration for the local forest department. The movement also has many informal partnerships with similar movements elsewhere in India, and participates in a regular exchange of ideas and support.

An interesting form of partnership exists between the business owners and community leaders of Ubud, and foreign visitors. Most tourists cooperate with the community by respecting local guidelines regarding such matters as dress and behaviour in temples. There is also a core group of tourists and foreign residents who are keenly aware of the qualities of Ubud that

distinguish it from more mainstream tourist centres on Bali, and are anxious to help the village preserve its cultural integrity.

In all of the above examples, the communities tend to take an open, flexible approach to partnerships, working with groups and individuals when it is practical and mutually beneficial to do so. The spirit is one of genuine partnership, in that the participants are respected as equals.

### 5.3 Security of Land Tenure

The struggle for security of land tenure has been central to many development efforts throughout the world. It is an issue that is critical for many communities, including some of the cases presented in this report.

Many land tenure struggles deal with the basic task of finding secure homes for community members. Rancamanyar Ecoville provides a relevant example. Much of the history of this community of scavengers has been focussed on the struggle to obtain a secure and officially recognized place to live, along with status as a member of the larger society. As noted earlier in section 3.0, the community members were evacuated from their original location, which they occupied as squatters. Obtaining the current location on the outskirts of Bandung represented a major breakthrough that is now allowing the community to divert its full energies toward income generation, education, and other aspects of community development.

In other cases the issue relates more to access to land-based resources which are essential for community survival. In general, each of the villages involved in the Chipko movement attempts to secure at least one large tract of common land for communal use by village members as a source of fuel wood and fodder. The ability to manage and control access to this resource is considered an essential "first step" in the processes of land rehabilitation, productive forest management and overall community development.

Depending on local circumstances, the issue of land tenure can assume major importance as a basic prerequisite to other development tasks. This is also an issue to which outside facilitators, who often bring a capacity to deal with outside authorities, can contribute on behalf of a community that sees itself as powerless.

## 5.4 Alternative Income Generation Opportunities

The creation of income generation opportunities is vital to successful local development strategies. It is also a major challenge.

The communities profiled for this report demonstrate a diverse range of income generation efforts. The Rancamanyar case is particularly interesting in that it is an effort to strengthen and, in some ways, to formalize the informal economic activity of scavenging. The people of Rancamanyar have also recognized the wisdom of diversification, and have launched several small service businesses and agricultural activities using financing from the community co-op.

The Tangail project illustrates how the revival of a traditional industry, weaving, can create more income for more people. This project is also an example of a *rural* industrialization approach, indicative of the kind of broad industrialization strategy which is believed by many observers in Bangladesh to be essential for long term economic sustainability.

The focus of community efforts in Ubud has been the tourist industry, and the development and control of the economic opportunities it presents. In this regard, the community has been "successful" to the point that many members are more concerned about issues such as managing rapid economic growth, promoting diversification, and ensuring that the benefits of growth are distributed more equitably.

In the work of Chipko in India and KBKK in the Philippines, tremendous energy has been put into resolving resource management conflicts in a manner that preserves access to resources for local residents. Income generation efforts are built on this base.

These examples, though diverse, share some common principles. All emphasize self-sufficiency and self-reliance at the community level and at the level of individual families. The economic development strategies selected favour small scale, decentralized businesses that can be owned and operated by community members. Grants, gifts and other forms of charity play a very minor role in the creation of income generation opportunities, while the provision of low cost, accessible credit (cash or "in kind") is usually essential (see below). The transfer of technology, through various formal and informal education methods, is also important.

Although, many new income generation opportunities have been created in the communities observed, there is widespread recognition that much more work is required in this area. Some community leaders are concerned about the vulnerability and often marginal income potential of small, informal

business ventures. Others cite the difficulties involved in promoting small scale industry, particularly in rural areas, in countries such as the Philippines and Bangladesh where national economic policies are heavily biased in favour of large-scale, urban based economic development.

### 5.5 Low-Cost, Accessible Credit

One of the most straightforward and practical mechanisms for stimulating sustainable development at the local level is the provision credit at reasonable rates of return. There is now ample evidence throughout the developing world that the poor, with limited resources and no collateral, can leverage small loans of cash, tools, materials and other essential inputs into productive business ventures. These ventures, which are almost invariably of relatively small scale, tend to demonstrate self-reliance, flexibility and moderate ecological impact.

Rancamanyar and Tangail provide the most explicit examples of the use of credit. In the former case the community co-op provides loans for small business purposes, while in the latter groups have been formed in the weaving and agriculture sectors to administer loans. In both cases the facilitator (ITB/CES and UBINIG, respectively) has been instrumental in providing financing and assisting the community in securing loans.

A number of general observations concerning these and other cases are noteworthy. First, the provision of credit is often necessary to break the chain of dependency on local money lenders. People in poor communities are almost universally excluded from the services of traditional financial institutions because they lack collateral or the literacy skills required to complete forms and procedures. Money lenders become the alternate source of credit, at usurious interest rates. In Tangail, for example, money lenders provided the only source of cash for weaving materials, and demanded exclusive rights to the saris produced. Weavers were kept permanently marginalized in this traditional patron-client relationship. Since the establishment of an alternate credit source, weavers have been able to pay back loans, sell their product freely through several channels, and increase their incomes.

Second, community facilitators in the projects studied tend to reject the concept of charity in favour of loans which encourage self-reliance, discipline, confidence and long-term sustainability. In all cases the capacity of community members to turn small loans into productive income generation activities is well-demonstrated.

Third, the size of loans required is typically very small. In just one of many examples in Rancamanyar, a loan of two goats has been used to launch a productive livestock raising venture. Based on the communities observed, it is far more effective to make small loans available in a manner that responds directly to the needs and desires of community members, than it is to introduce large grants or donations.

## 5.6 Innovative Community Education Processes

Many active processes of education, both formal and informal, are at work in each of the communities investigated. These processes are viewed here as essential to development not only because they contribute to the personal growth of each individual, but also because they support the dissemination of ideas, technologies and programs.

In most cases, efforts are underway to provide better education opportunities for children. One of the problems observed by UBINIG when it began working in Tangail is that children were unable to attend government schools because they were required at home to help with the weaving. The response was to launch independent schools in the villages with classes scheduled so that children can learn *and* work. The members of Rancamanyar are now in the process of building a school for community children, and access to formal education is an ongoing issue that is being addressed by several of the villages participating in the Chipko movement.

Regarding adult education, some form of conscientization, defined broadly to include any process by which people are made aware of the basic societal forces affecting their development, is underway in most cases. For the members of KBKK in the Philippines, conscientization work is explicit and in the form of workshops. In other cases (e.g. Rancamanyar) informal meetings have been used for this process. Facilitators in Rancamanyar make specific efforts to initiate critical thinking, and feel that this skill is an essential first

step in community development. DGSM, the main coordinator of the Chipko movement, places particular emphasis on helping villagers to understand that there are practical steps they can take to improve their welfare; they are not simply the victims of unchangeable circumstances. (It is noteworthy that the eco-development camps of Chipko fulfill a variety of educational objectives, including instruction in basic ecology as well as conscientization.)

One of the most striking features of the education work in these communities is the frequent and often highly creative use of practical demonstrations. This is perhaps most evident in the use of demonstration farms and nurseries. A demonstration plot of some kind has been established by participants in KBKK and Chipko; one in Tangail will soon be in operation. Community leaders find that members will adapt new methods only when they see them working in the local context, and that these demonstration centres provide an excellent location for practical research (see below). Such demonstration centres usually serve as a base for extension work among area farmers, who are often encouraged to set aside small sections of their own land for additional experimentation. Techniques which are essential to sustainable development, such as ecological agriculture and agroforestry, are being adapted as a result of processes like these.

Education is a dynamic, multi-faceted process in the communities studied. Formal and informal methods are used to meet the needs of both children and adults. Community leaders and facilitators are usually adept at improvising and bringing together a blend of techniques that meets the range of educational objectives -- from basic literacy to political awareness.

## **5.7 Practical Participatory Research Techniques**

Open, participatory research techniques are used constantly in the communities observed to help members identify their needs and determine the best possible response. These techniques are open, organic, and responsive to changing needs.

The facilitators involved in all cases have long histories of direct involvement with community members. Frequent community meetings and informal discussions have been used to establish relationships, build

confidence and identify community needs and priorities. In no case did an outside group or individual impose an external definition of needs or required action.

In two cases -- Rancamanyar and Tangail -- facilitators entered the community to complete a participatory research program and this initial encounter evolved quite naturally into a community development projects.

Participatory research continues in all cases and is used to perform a number of functions. One is simply the process of gathering constant feedback on development progress, so that the next round of programs can be improved upon. Another is the introduction and adaptation of new technologies.

In Tangail, research among the weavers identified the limitations of current loom technology. Further research sourced a superior technology in another district, and tested the feasibility of introducing an upgraded loom in Tangail. Facilitators are now working closely with weavers to acquire the first of the new looms and learn to use it. In a similar manner, technologies for house building, livestock raising and recycling have been introduced at Rancamanyar.

The demonstration farms and nurseries mentioned above provide outstanding examples of participatory research in practice. In all cases where the demonstration plots exist, they are used to test new species and new methods. The farms are visited, if not worked, by area farmers who observe tests directly and often try their own ideas. The research undertaken is innovative, as well as practical, as progress is being made in key areas such as low input, chemical-free agriculture.

## 5.8 Application of Local Ecological Knowledge

In all cases, community members are developing an awareness and understanding of the ecosystems in which they live, and how they can work within these systems to develop agriculture and manage natural resources in a sustainable manner.

The extent and intensity with which this is occurring varies. It is probably most striking in the villages of the Garhwal Hills, where ecosystems are most

sensitive. Here virtually all community members, led by the women's groups, are intimately aware of the forests and their crucial, multifaceted role as sources of fuel wood, fodder and food, and mechanisms for water retention and slope stabilization. There is a very high degree of understanding of planting techniques, species selection, forest management and water management, all appropriate to local circumstances. This knowledge is applied daily and has resulted in impressive rehabilitation of micro-watersheds, and a significant progress toward the restoration of the Alaknanda watershed when the combined impact of participating villages is considered (see section 2.0). It is noteworthy in the case of Chipko that although the focus of development is on tree planting, the perception of the role of trees is much broader, more complex and more closely linked to other aspects of development than here in the North. Tree planting is the core activity in a comprehensive ecosystem restoration strategy, and a prerequisite to overall community development.

Similar ecological knowledge is applied in other communities. In Tangail, the efforts to introduce more advanced, ecological farming methods into an area where high input, chemical intensive methods are the norm are based on careful research conducted at a nearby training and research centre. Area farmers will continue to adapt those techniques that work within the local ecosystems, while at the same time developing their understanding of local ecology.

The importance of local ecological knowledge is also demonstrated in Rancamanyar, where the community is forced to make the most productive use of a relatively small parcel of land in a suburban setting. Similarly, the members of KBKK are forced to deal with their own local environmental circumstances by, for example, finding the agricultural crops that will survive one of highest typhoon frequencies in the Philippines.

In some cases, the development of local ecological knowledge represents a revival of traditional knowledge which has existed in the community for many years. In Ubud, specific methods of tree planting, forest preservation are incorporated into age-old religious practices, and local community members have tried to use these methods in shaping contemporary tourist development.

The role of outsiders in this process of developing and applying local ecological knowledge may involve facilitation and support, perhaps by introducing methods from similar areas for experimentation and potential adaptation. In no case is knowledge simply imported from elsewhere in the country, let alone from the North.

## 5.9 Special Consideration for the Roles of Youth and Women

To varying degrees, women and youth are making vital contributions to the overall development of the communities examined. In several cases, these contributions have been facilitated by programs or initiatives aimed directly at one or both of these special groups.

A pertinent example is found in Tangail, where women have traditionally played a central role in the weaving process; they operate the looms, which they use to complete the final step in a complex production process that involves several stages and many people. Many of the women in this role were exploited, working long hours to produce for husbands and money lenders. UBINIG staff members recognized the importance of this role and the need to eliminate exploitation, and have worked directly with the female weavers as key individuals since the outset of their involvement in Tangail. Today, the women lead well organized and highly productive weaving groups, and through credit program in which they are directly involved, have broken the chain of dependency and exploitation. The entire community has benefited as a result.

A similar pattern is found in the Garhwal Hills, where women have traditionally assumed responsibility for fuel wood and fodder. By the late 1970s, women typically spent up to 16 hours each day on the arduous task of collecting increasingly scarce fuel wood. Today, this daily routine has been cut to 6 or 7 hours for most women in the villages where forest resources have been restored. Women now spend more time with their children, participate in many aspects of village life, and add immeasurably to overall village welfare. The women have retained their traditional role, but have expanded it into a sophisticated form of biomass management. Through the *Mahila Mandal Dal* (womens' groups) they have assumed a form of broad-based leadership that influences all aspects of community development.

Most community leaders are well aware of the importance of youth in community development, and have taken steps to encourage the involvement of young people. In the two examples cited above, Tangail and Chipko, children work closely with the women as they carry out their respective tasks of weaving and forest management. As the role of women has evolved, the children have been engaged in an active and intensive process of learning and practicing the fundamentals of the local economy.

In another example, Ubud, the participation of youth in religious ceremony and all forms of artistic pursuit, including painting, theatre, dance, carving and music, has long been recognized as a key indicator of the health of local culture. The continuity of this rich culture across generations is seen as central to development, regardless which economic pursuits are taken on by

community members. Consequently, young people receive a thorough grounding in the local culture through formal education and a large network of active groups, clubs and opportunities to apprentice with local artists.

Both women and youth are heavily involved in the many non-governmental organizations and people's organizations in the Philippines. This is demonstrated in KBKK, which is strengthened by very active participation from both groups.

### 5.10 Integrated Approaches to Development Issues

Critical to sustainable is an understanding of the linkages between economic, social, political and environmental issues. In all of the communities investigated, there exists an understanding of these linkages, and an ability to deal with them in the practical processes of development.

The people involved in KBKK have no apparent difficulty accepting, supporting, understanding and working within an organization that covers the full spectrum of development issues, ranging from ecological agriculture to warrantless arrest. As noted earlier, the participants in Chipko Andolan do not see themselves as simply involved in tree planting, or even environmental restoration. Rather, their ecological work is the focal point for overall improvement in their lives. In Ubud, community members respect ancient religious and cultural traditions which deal comprehensively with all aspects of daily life.

The importance of the capacity to manage diverse issues simultaneously and to appreciate the relationships among issues cannot be overstated. It provides the basic foundation for resolving the sensitive balances between environment and development.

The communities studied offer evidence that this balance can be achieved. The people of the Garhwal Hills have seen their livelihoods improve and the hillsides greened at the same time. It would appear that this broad, integrated perspective, coupled with decision making systems that place authority in the hands of those affected by decisions, presents a clear opportunity for sustainable development.

We in the North can learn a great deal from the ways in which the communities of the South apply integrated approaches to development issues. It is crucial to the objectives of global sustainable development that we allow these integrated perspectives to evolve in the developing world, learn from them, and refrain from imposing our more primitive reductionist thinking through the design of development assistance.

### 5.11 Measures to Promote Regional and National Impact

As noted in the introduction to this report, it is tempting to dismiss small scale, community-based projects, like those investigated for this study, as insignificant relative to the overall challenge of global sustainable development. This view, however, may be shortsighted and simplistic. The combined impact of community-based projects around the world is changing the way we view development, and these projects provide many clues which enlightened policy-makers will hopefully use in their macro-strategies. Further, many well-designed community efforts have a significant potential to stimulate larger scale change through demonstration, expansion and replication.

Specific measures that have at least the potential to influence development patterns at a regional or national scale are viewed here as one of the success factors of community based efforts. All of the projects examined for this study have such measures in place, although the impact to date has varied widely.

Chipko is the most advanced in terms of extending influence beyond the level of community or village. As noted earlier, a loose, flexible form of coordination among participating villages has resulted in significant restoration of a major section of the Alaknanda River watershed. The movement has also to permanent changes in the forest management policies and practices of state and local governments, and has influenced the formation of similar movements elsewhere in India.

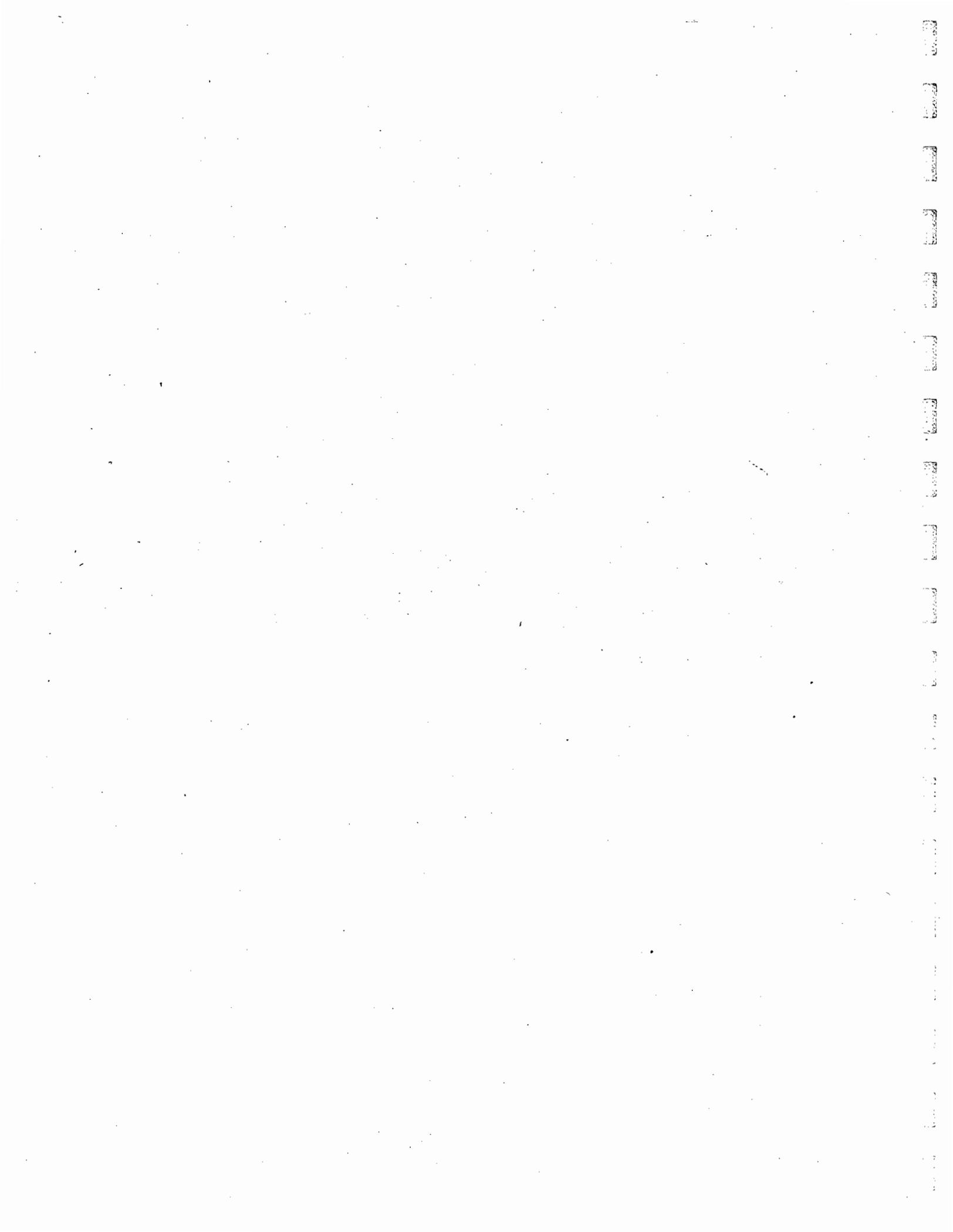
KBKK is linked to the national peoples' movement in the Philippines and works directly and constantly with activists at the national level. UBINIG uses the knowledge gained in Tangail to advocate specific policy changes at the national level. In Rancamanyar, the effort to improve the welfare of the scavenger community is part of the broader program to reform municipal

solid waste management. Ubud exists as one of the few small communities in the midst of a thriving international tourist industry that has retained some measure of genuine social and cultural integrity. As such, it is being watched carefully by advocates of alternative tourism around the world.

A persistent theme throughout this research is that the community development initiatives identified, which represent only a small sampling of similar projects throughout the developing world, have considerable untapped potential to grow and spread in many ways, enhancing progress toward global sustainable development in the process.

One way to promote this process is to improve coordination among the many small voluntary groups and NGOs involved at the community level. In some instances it is clear that improved coordination and concentration of community development efforts, perhaps on an ecosystem basis, would result in much greater impacts that extend well beyond individual communities.

Another way involves the removal of barriers to community action that exist at the regional, national and international level. Among these barriers are political constraints on the voluntary sector, economic policies that favour urban industrialization to the detriment of rural hinterlands, corruption at all levels of government, the imposition of large-scale infrastructure projects, overly centralized political systems, and any limitations on basic human rights. From the perspective of sustainable development, it may be far more effective for policy-makers to focus on removing the barriers that constrain community action, than it is to impose more top-down development strategies.



## 6.0 IMPLICATIONS FOR CANADIANS

The five communities profiled in this report are making real, tangible progress toward sustainable development. They are doing so by applying a high degree of skill, talent and commitment across a broad spectrum of development priorities. Moreover, these communities are not unique; they represent only a small sampling of the hundreds, if not thousands, of progressive communities throughout the developing world.

This has a number important implications for Canadians, as participants in the global process of development.

One message is obvious: We have much to learn from the people of KBKK, Ubud, Rancamanyar, Tangail and Chipko Andolan, who are putting principles of sustainable development into practice. All too often the flow of information is from North to South, and the underlying assumption is that, just because we in the industrialized nations have mastered the technologies of mass production and consumption, we know something about the art of sustainable development. Adding to this bias is the perception held by many Canadians that the people of the developing world are somehow unable to resolve development challenges without our help.

Meanwhile, there are communities that are *doing* what countless books and articles on sustainable development preach -- managing social, political, environmental and economic issues as dimensions of an integrated whole, resolving the sensitive balances between environment and development, and improving the welfare of all community members, including those of future generations.

In short, there are many lessons for Canadians -- including those of us who are trying to introduce more sustainable practices here at home, not just those who are wrestling with similar challenges through our development assistance programs abroad.

Some of these lessons address specific methods or technologies. Communities throughout the developing world are routinely experimenting with techniques that are inherently resource efficient and ecologically sound

and, as such, have tremendous potential in helping both North and South undergo a transition to sustainability. Even within the five communities profiled for this study, there are practical examples of agroforestry, organic agriculture, recycling, composting, watershed restoration, rural industrialization, eco-tourism, communal forest management and small business development, to name a few. Of course, these techniques are not simply transferable, wholesale, to industrialized economies in temperate climates. But they do demonstrate principles, approaches and creative ideas that can help us in resolving our own strategies.

Other lessons relate more to the *processes* of development -- the "how" rather than the "what." In the developing world there are numerous methods of participatory organization that allow people to identify needs and resolve issues. There are innovative environmental education programs that are communicating the principles of environment and development to entire communities. There are mechanisms for involving youth, women and indigenous people in development, despite imposing social and economic barriers. Perhaps most importantly, many communities are proceeding to deal with the full range of development challenges in an integrated manner. They are demonstrating a practical understanding of the interrelationships among issues that is still foreign to the Western mind, but essential for sustainable development. Again, it is unlikely that any of these processes can simply be imported to the North without substantial adaptation. But they are worthy of careful investigation, particularly given that many of our established institutions are unprepared for the challenges of sustainability.

It is understood that these notions of lessons learned from the developing world and information flowing from South to North run counter to common assumptions held by many Canadians. The image of talented and committed people making substantive progress toward sustainable development contrasts sharply with the dominant vision of the Third World presented in the popular media -- that of starving masses struggling from disaster to disaster, helplessly waiting for the next airlift of food aid.

There is an overriding need for a more accurate understanding of the developing world in all sectors of our society, fostered and promoted by more balanced portrayals in all forms of communications media. Such understanding can help tremendously by encouraging Canadians to begin to perceive themselves as equal partners with the people of developing countries in the specific task of information exchange, and the general process of global development.

This need is all the more poignant when we pause to consider not only how some communities in the developing world are making real progress toward sustainable development, but also how poorly we are doing in this regard.

The communities profiled in this report, and many other communities throughout the developing world, are doing so much with so little. They are facing the challenges of sustainable development, head on, against tremendous odds, and with resources that are so limited as to be beyond the imagination of most Canadians. Meanwhile, we continue to stand virtually uncontested as global leaders in consumption, waste generation and inefficient resource utilization. Although the list of our "accomplishments" in this regard is long, it is sufficient here to note that we lead the world in per capita energy use and solid waste disposal, two of the most fundamental indicators of *unsustainability*.

With this track record in mind, failure to listen to the communities of the developing world is dangerous, for all of us. And any attempt to position ourselves as leaders in sustainable development is insulting to those people throughout the world who struggle to manage on what economies like ours leave behind. We should proceed toward sustainable development with humility, in the spirit of partnership with our counterparts in the developing world, and beginning with the daunting, but unavoidable job of cleaning up our own house.

## 6.1 Potential Roles for the NRTEE

Canada's National Round Table on the Environment and the Economy is uniquely positioned to promote sustainable development both domestically and internationally. It is a credible, multi-stakeholder group with the potential to influence many different sectors of Canadian society, and a mandate to consider development issues broadly, comprehensively and creatively.

Throughout the course of field research and analysis, a number of suggestions for possible consideration by NRTEE were raised. These are categorized and summarized below.

## *Sustainable Development Guidelines*

The term "sustainable development" is used frequently around the world, particularly by government officials and agencies. Opinions regarding its meaning vary widely, however, and in some cases its original intent has been distorted to include such definitions as "development projects with long term funding" or "business as usual, with an occasional speech about the environment."

Clarification and refinement of the term is essential, particularly if it is to be used as a philosophical underpinning for public policy. This is an area where Canadians might look to the NRTEE for guidance.

With regard to communities in the developing world, NRTEE could make an important contribution by defining what constitutes a sustainable community, in principle and in practice. These guidelines could then be used in various information exchange activities, as well as in the formulation and implementation of Canadian development assistance policy (see below).

## *Information Exchange/Development Education*

As argued above, enhancing the two-way flow of information between South and North is viewed as a high priority. There are many possibilities for productive information exchange, some of which could possibly be facilitated or supported by the NRTEE.

One area with considerable potential is exchanges between community workers in the developing world and their counterparts in Canada. The most valuable exchanges are often the most direct -- from practitioner to practitioner. It is recognized here that many exchanges are underway continuously, as workers from around the world visit Canada, and vice versa. There are numerous international conferences, seminars, exposures and research projects underway at any given time, and this work should be encouraged. The NRTEE could monitor such efforts and provide support to those which are specifically related to sustainable development and allow people at the practitioner level to meet and share ideas. In addition, the NRTEE could function as a catalyst to help launch specific exchange projects where there is an identified gap or need.

NRTEE could extend this catalyst function to include broader communications projects that will help Canadians to understand the positive, constructive examples of sustainable development underway in the developing world. Examples include documentary films for general

audiences or national development education initiatives aimed at primary or secondary schools. NRTEE could help to bring together the parties who would be involved in producing and delivering such projects.

A related need is the enhanced distribution of existing materials -- produced both here and in the developing world. In countries such as India for example, there are many creative writers, film producers and artists who are focussing their energies on development issues. Although they have important stories to tell, they lack outlets in the North. Again, this may be an area for NRTEE involvement.

### *Canadian Development Assistance Policies and Programs*

It has been argued throughout this report that the communities studied demonstrate principles of sustainable development in practice, albeit on a small scale. They are worthy of support and encouragement by those governments that espouse the principles of sustainable development, including ours.

Canada, through the Canadian International Development Agency (CIDA) is already involved in projects like these. In fact, in two of the cases included in this study -- Tangail and KBKK -- CIDA is involved indirectly through its support to Inter Pares. Other agencies, such as the South Asia Partnership (SAP) and the International Development Research Centre (IDRC) are using some CIDA resources for similar purposes. Unquestionably, however, much more can be done.

The NRTEE can play a role in encouraging greater Canadian support of community-based sustainable development projects. This can be enhanced by the clarification and promotion of the principles and practice of sustainable development to those involved in the policy-making process (see above). There is a related need, possibly involving the NRTEE, to review, critique and reform aspects of Canadian development assistance policies and programs which may hinder or damage community-based sustainable development efforts. Examples include development projects which are designed with insufficient community input, and/or inadequate sensitivity to local ecosystems.

The NRTEE might also be able to contribute by encouraging better coordination of community based sustainable development efforts. One weakness of small scale projects such as those reviewed for this study is that coordination in a manner to leads to large scale impact on a regional, national or ecosystem basis is very difficult to achieve. Effort is needed to determine

where and how Canadian development assistance resources can be concentrated and coordinated to encourage sustainable development. There are many possibilities. Within countries such as Bangladesh, for example, development assistance over a period of time could be focussed on projects located in a common watershed so that collective efforts at a village level translate into tangible, large scale improvements.

Finally, Canadian development assistance should flow to those nations where the conditions exist to allow community based sustainable development initiatives to become established and to flourish. These conditions include, for example, freedom of operation for the voluntary sector, policies which permit and support small scale entrepreneurial activity, protection of basic human rights and freedoms, and opportunities for democratic participation and decentralized decision making.

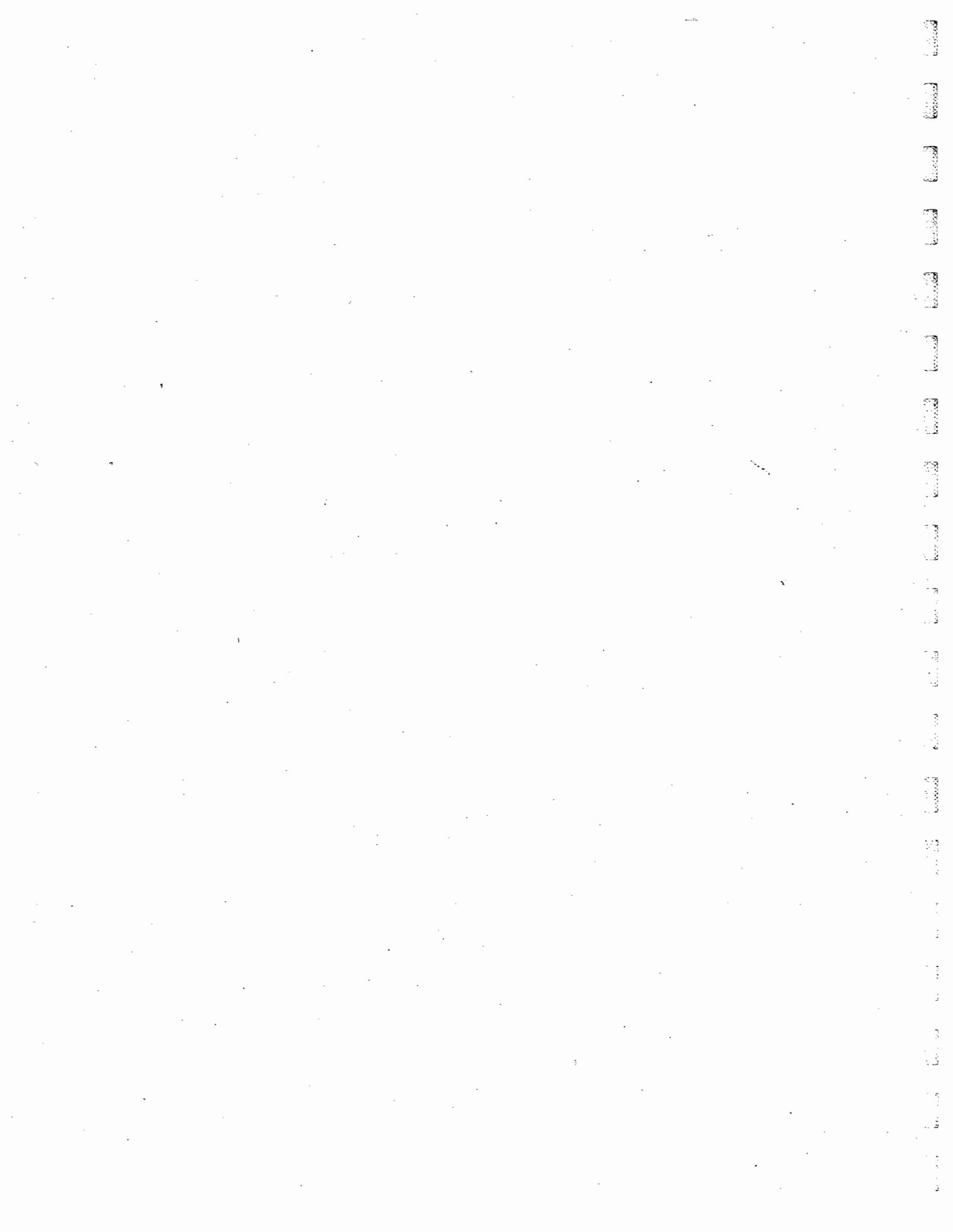
### *Sustainability in Canada*

As discussed above, Canadians support some of the most unsustainable practices in the world in their own homes and communities; we have a responsibility as members of the international community to change our consumption habits radically and permanently. The work of the NRTEE and other groups and agencies throughout Canada in encouraging this change is strongly encouraged.

In addition, every Canadian should understand the fundamental relationship between the extent to which we apply the practices of sustainable development in our own communities, and the extent to which we contribute, positively or negatively, to global well-being.

The NRTEE can potentially contribute in this regard as well by constantly reinforcing these linkages.

# APPENDIX



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