

*Juma, Calestous, and Vanessa Timmer. 2003. "Social Learning and Entrepreneurship: A Framework for Analyzing the Equator Initiative and the 2002 Equator Prize Finalists."
Working paper of 5 December.*

**Social Learning and Entrepreneurship
A Framework for Analyzing the Equator Initiative
and the 2002 Equator Prize Finalists**

DRAFT: 5 December 2003

Calestous Juma

Professor of the Practice of International Development
Belfer Center for Science and International Affairs
Kennedy School of Government, Harvard University

and

Vanessa Timmer

Pre-doctoral Research Fellow
Center for International Development
Kennedy School of Government, Harvard University

INTRODUCTION

A honey-harvesting eco-enterprise in Kenya, a marine reserve network in Fiji, and an agro-biodiversity conservation system in India are all examples of local community innovations that were selected to be finalists for the 2002 Equator Prize. The Equator Initiative is a partnership of eight international, national and local organizations that aim to identify local innovations in equatorial countries that have effectively conserved natural resources while improving livelihoods. This paper is divided into two parts. The first section outlines the context within which the Equator Initiative was founded. It highlights the challenges posed by the global sustainable development agenda and the role of social learning in addressing this challenge. The second section focuses on the Equator Initiative as a manifestation of society's desire to learn how to operationalize sustainable development. The paper then proposes that a focus on entrepreneurship needs to be central to analyzing the Equator Prize nominees and that the Equator Initiative can play an active role in identifying, learning from and nurturing entrepreneurship.

I. SUSTAINABLE DEVELOPMENT AND SOCIAL LEARNING

The Global Sustainable Development Agenda

The World Commission on Environment and Development in their report, *Our Common Future*, posed an urgent challenge to policy-makers and society to achieve sustainable development through meeting human development needs while preserving the earth's life support systems (WCED, 1987). This report has come to symbolize a shift in the evolution of the global sustainable development agenda from a focus on raising awareness about global environmental problems at the 1972 UN Conference on the Human Environment to a focus on sustainable development and the integration of environmental, economic and social imperatives. The WCED recommendation to the United Nations to host an international conference at the heads of state level led to the convening of United Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. At UNCED, the international community outlined the fundamental principles of sustainable development in the *Rio Declaration* and the program of action for achieving sustainable development in *Agenda 21*.

The sustainable development agenda was further reinforced in the Millennium Report of UN Secretary General Kofi Annan who highlighted environmental sustainability as an urgent challenge that requires "leadership at the very highest level...if we are to bequeath a livable Earth to our children — and theirs" (Annan, 2000). Annan also noted the importance of the 2002 World Summit on Sustainable Development as a follow-up to UNCED.

"It is my hope that the world's leaders will take advantage of the time remaining [until WSSD] to revitalize the sustainability debate and to prepare the ground for the adoption of concrete and meaningful actions by that time." (Annan, 2000: 56)

The World Summit on Sustainable Development was held in Johannesburg, South Africa with the aim of building on the achievements of UNCED and implementing the goals outlined in Agenda 21. The resulting Plan of Implementation clearly stated that nation-states commit themselves “to undertaking concrete actions and measures at all levels and to enhancing international cooperation” (WSSD Plan of Implementation, 2002: 1). The task of implementing the global sustainable development agenda was broadened beyond the international policy arena “to involve all relevant actors through partnerships, especially between Governments of the North and South, on the one hand, and between Governments and major groups, on the other, to achieve the widely shared goals of sustainable development” (WSSD Plan of Implementation, 2002: 1). In addition to the outcome of traditional agreements amongst national governments, WSSD was unique in the history of UN summits in its recognition of bilateral partnerships and partnerships amongst governments, the private sector and civil society (Type II agreements) as official outcomes of the WSSD. The Equator Initiative was founded as a response to this call to operationalize sustainable development and is a registered Type II partnership.

Social Learning to Operationalize the Global Sustainable Development Agenda

What we all need at this point in human evolution
is to learn what it takes to learn what we should learn –
and learn it.

- Aurelio Peccei,
forward in J.W. Botkins, M. Elmandjra and M. Malitza (1979)
No Limits to Learning: Bridging the Human Gap – A Report to the Club of Rome.

Literature Review - Social Learning

The task of implementing the global sustainable development agenda is both an urgent and complex challenge. In his Millennium Report, Kofi Annan referred to the gap that exists between the nature of the task and society’s ability to respond.

“We must face up to an inescapable reality: the challenges of sustainability simply overwhelm the adequacy of our responses. With some honorable exceptions, our responses are too few, too little and too late.” (Annan, 2000: 56)

The gap between the growing complexity of the sustainable development challenge and our capacity to cope and respond to the task has been termed the “human gap” (Botkin et. al, 1979) and the “ingenuity gap” (Homer-Dixon, 2000). Bridging this gap requires humanity to draw on its ability to learn. The centrality of learning stems from the fundamental uncertainty about the nature and consequences of the sustainable development challenges and from the recognition that the knowledge and skills that are required to address these challenges are shifting rapidly. Implementing sustainable development is a knowledge intensive process. The construction of knowledge systems to guide implementation strategies increasingly requires the sustained, iterative development of ideas and conceptual frameworks, and the participation of a diversity of actors that influence and are affected by the decisions being made. Learning to implement the sustainable development agenda is a social process of knowledge acquisition, distribution, interpretation, and retention and of action based on this

knowledge across multiple actors in society. The term ‘social learning’ has emerged to encompass this type of learning within larger collective entities in society (Clark, 2001).

‘Social learning’ has multiple meanings across academic disciplines. The most common use of the term social learning is in the field of social psychology and in the development of social theories of learning that highlight the social context within which individuals learn (Bandura, 1977). Social theories of learning can be contrasted with traditional behavioral and cognitive theories of learning that emphasized the role of observation and of mental processes. Within clinical psychology, Julian Rotter challenged the dominance of Freud’s psychoanalysis by proposing an alternative theory of personality development. Rotter’s Social Learning Theory focused on how personality represents an interaction between the individual (i.e. life history of learning and experience) and the environment (i.e. stimuli that the person is aware of and responding to) (Rotter, 1954). The model of ‘situated learning’ is also a social theory of learning. It was proposed by Jean Lave and Etienne Wenger and is more radical in its rejection of simple knowledge acquisition as learning. Lave and Wenger propose that learning requires involvement in communities of practice where the learner participates in community frameworks and adopts behaviors that fit the structure of that community. They focus on the ways in which “learning is an evolving, continuously renewed set of relations” and how social engagements provide the proper and facilitative context for learning to take place (Lave and Wenger, 1991).

In general, social theories of learning embrace the notion that learning occurs both inside the human mind and in social interaction. Learning can even occur in collective entities. Six meanings of the term social learning are distinguished by Salomon and Perkins in their article “Individual and Social Aspects of Learning” (Salomon and Perkins, 1998). The first five focus on individuals learning within social contexts through interaction and through the use of cultural artifacts. They also include learning by individuals who are acquiring the knowledge and skills to be social learners. The fifth meaning that Salomon and Perkins attribute to social learning is learning of a collective entity such as a social grouping, organization, or culture (Salomon and Perkins, 1998). Rather than an individual learning within a social context, the focus of analysis falls on a social entity that acquires knowledge, skills, and understanding as a collective learning system. Concepts such as learning, memory, trial-and-error and reinforcement need to be tailored to suit this different more encompassing context. The core notion is that collective entities have the capacity to learn and that it is also possible to educate them to become better learners. This is the motivation behind the consultants and companies that have drawn on organizational learning theory in an attempt to distill the attributes of a ‘learning organization’ that can then be taught to other organizations (Easterby-Smith and Araujo, 1999; Senge, 1990). The focus of organizational and social learning literature is on making learning a conscious and deliberate focus of the organization in a way that practitioners might seek a broader theory of learning for achieving their goals (Schön, 1983).

Organizational learning theorists focus on stable changes in overt behavior as being central to organizational learning in addition to the acquisition of knowledge and the social construction of knowledge (Argyris and Schön, 1996). For example, they analyze

changes in organizational routines (Levitt and March, 1988) or standard operating procedures and organizational conduct (Wieck, 1979). The learning can occur through internal processes such as strategic planning sessions that enable setting new goals and reflection. Assessment, evaluation, performance measures and indicators can provide important feedback as to whether goals are being achieved. The internal system can encourage innovation and accidental variation by “organizational slack” that embraces error and experimentation (Levitt and March, 1988). An organization can also learn by acquiring new information and knowledge external to the social system through the acquisition of individuals, units, databases, and new models of divisions of labor (Levitt and March, 1988).

In analyzing collective entities such as organizations and societies, it can be argued that knowledge is distributed amongst individuals and units in the social system as they participate in an active, constructive process of creating that knowledge together. For example, the knowledge, experience and skill of a sports team might not be reducible to the knowledge, skills and experience of each individual player but is a characteristic of the team as a whole. Some patterns of behavior may be predicted from the cumulative effect of individual actions; however, other patterns may unexpectedly emerge from interaction. In order to learn to address complex problems, participation of stakeholders with different perspectives, knowledge bases and experiences need to be brought together to engage in dialogue.

The concept that societies can learn is a controversial one. It may be possible to draw similarities with organizational learning; however, as L. David Brown notes “we cannot assume that social learning [in interorganizational networks, communities and nations] will necessarily be similar to organizational learning” (Brown, 1999). Certain aspects of learning do remain the same. The difficulty of preparing for rare high stake events remains constant across individual, organizational and societal learning. These events take place too irregularly to enable lessons of experience to be drawn and they often reoccur in radically changed contexts. Similarly, there is a need to develop institutional capacity to acquire knowledge, monitor actions and retain lessons learnt at the societal level just as there are at the individual and organizational level. Error-embracing behavior and experimentation to stimulate innovation also seem to be common across scales.

Ultimately, social learning as societal learning is a metaphor that combines the concept of society with the concept of learning in order to enable the analysis of society as if it were able to acquire knowledge, skills, and expertise and to learn and reflect on its experience. This metaphor can distort the meaning of learning.

“Who learns? At one level, the answer to this question is simple: individuals learn. Little in the body of work on social learning suggests that it is helpful to reify society as a discrete and reflective identity. That said, however, it has been proven productive to identify the social groupings of individuals within which learning occurs, and the institutional forms that stabilize and transmit the resulting lessons” (Clark, 2001: 382).

Other scholars maintain that societies as a whole can and do learn despite the limitations of the social learning concept (Botkin, 1979). For example, the emergence of corporate environmentalism in such industries as the oil and gas industry can be seen as a fundamental shift in patterns of interaction at a societal scale between the corporate sector and the public sector (Hoffman, 2001). The historical trajectory of a society can influence its ability to learn. Moses Abramowitz has proposed the concept of “social capability” to highlight different capacities of societies to adopt productive technology and organizations of production due to differences in such variables as level of education, institutional setting and vested interests (Abramowitz, 1986). The “spiral model” proposed by Thomas Risse, Stephen Ropp and Kathryn Sikkink focuses on the causal mechanisms that lead to a “socialization process” whereby nation-states learn and internalize human rights discourse, norms and practice into state policy (Risse, Ropp and Sikkink). These shifts can be framed as societal scale transformations that amount to societal learning.

Defining Social Learning in the Context of Sustainable Development

How do we define social learning in light of these diverse meanings?

For the purposes of this analytical framework, social learning is defined as *increasing the awareness and enhancing the capacity of social systems to operationalize the global sustainable development agenda*.

This definition draws on a tradition of scholars that focus on social learning as it applies to societies response to global change (Botkin et.al, 1979; Milbrath, 1989; Finger and Verlaan, 1995; Brown, 1999; Clark, 2001).

After the Club of Rome Report on the physical constraints of societal expansion entitled *Limits to Growth* (Meadows et. al, 1972), the Club of Rome requested another report on human responses to this sustainable development challenge. The report *Limits to Learning: Bridging the Human Gap* was the response. This report focused on learning which was defined as being broader than a focus on education and schooling. The authors defined learning as “an approach, to both knowledge and to life, that emphasizes human initiative. It encompasses the acquisition and practice of new methodologies, new skills, new attitudes, and new values necessary to live in a world of change” (Botkin et. al, 1979). The lag in developing learning processes that are equal to the global problems societies face is framed as the central issue facing society because it limits society’s capacity by “artificially constrain[ing] and vastly underutiliz[ing]” human potential (Botkin et. al, 1979). The complex and dynamic nature of the challenges facing individuals and society leads Botkin et. al. to question whether conventional learning processes that assisted humans in their adaptation to their environment over the centuries is adequate to address the current types of problems.

“Traditionally, societies and individuals have adopted a pattern of continuous *maintenance learning* interrupted by short periods of innovation stimulated largely by the shock of external events. Maintenance learning is the acquisition of fixed outlooks, methods, and rules for dealing with known and recurring

situations. It enhances our problem-solving ability for problems that are given. It is the type of learning designed to maintain an existing or an established way of life. Maintenance learning is, and will continue to be, indispensable to the functioning and stability of every society. But for long-term survival, particularly in times of turbulence, change or discontinuity, another type of learning is even more essential. It is the type of learning that can bring change, renewal, restructuring, and problem reformulation – and which we shall call *innovative learning*” (Botkin et. al, 1979: 10 – emphasis in original)

Innovative thinking has traditionally relied on learning by shock through events and crises; however, faced with irreversible events such as nuclear war and species extinction, the traditional approach of learning by shock can be perceived as being too costly. The global sustainable development agenda was developed, in part, as a reaction to global crises such as acid rain and as an anticipatory response to possible future risks. Fostering innovative learning reduces vulnerability to these shocks and risks. Maintenance learning may also create a barrier for the emergence of innovative learning as adaptive responses can lead to responses that are superficial. Maintenance learning is reactive to external pressures. Innovative learning is proactive and anticipatory in its preparation for possible contingencies, side effects and long-range future alternatives. Techniques that can be employed in order to facilitate innovative learning include forecasting, simulations, scenarios and models such as Geographic Information Systems (Botkins et. al, 1979).

For Lester W. Milbrath, the individual human capability for learning provides the underpinning for society to learn to move away from the current unsustainable development path. Milbrath posits that social learning might not be visible but can be found by looking into the past and finding that “a dominant institution or practice is replaced by another” such as the shift away from slavery or colonialism (Milbrath, 1989: 89). Social learning in human communities seems to advance by “three processes: accumulation of knowledge, technological challenge and elaborate forms of communication” (Milbrath, 1989: 92). Finger and Verlaan similarly focus on the challenge of moving away from unsustainable practices and towards sustainable development and they propose that society engage in “social-environmental learning”.

“Traditional problem-solving approaches are bound to fail if these are pursued unilaterally and if the problems themselves are treated as discrete, separable units, approached only by specialists and experts. Social-environmental learning is proposed as an alternative to these traditional approaches. It is defined here as collective and collaborative learning that links the biophysical to the social, cultural and political spheres, the local to the global arena and action to reflection and research.” (Finger and Verlaan, 1995: 503).

L. David Brown in his analysis of social learning in North-South coalitions, focuses on subunits of society such as interorganizational networks, communities and nations and on their social system capabilities. For Brown, social learning is the “the emergence of frames and perspectives that can reshape behavior” and includes the enhancement of “social system capabilities to respond to new situations and solve problems” particularly

in light of the complex, dynamic challenges that societies face (Brown, 1999). In his review of the use of the term social learning, William Clark defines social learning as an “emerging family of perspectives that strives to take seriously the simultaneously science-laden and politically charged character of society’s encounter with global change, and to contribute to a more adaptive, reflective management of that encounter” (Clark, 2001).

David Korten, in his paper on “The Management of Social Transformation”, emphasizes that actions towards social transformation require shifts in social systems that are difficult to target and resistant to change because of the embedded and hidden value system and structures that seek to maintain the social system. These embedded values and structures can only be changed through the dedicated and long-term process of “acquiring and assimilating new experience – a process of social learning” (Korten, 1981). This is done by “effectively engaging the necessary participation of system members in contributing to the collective knowledge of the system and in generating policy choices out of ... a *social interaction* process” (Korten, 1981:613). Korten places the focus on designing social systems that can facilitate this interactive knowledge and policy construction process.

For the analysis of the Equator Initiative cases, we assume that societies as a whole can learn to manage global social, economic and ecological problems through transformations in their internal institutional forms and value systems. This process of social transformation takes place through shifts in the patterns of interaction amongst stakeholders and shifts in the guiding norms and principles of society.

Drawing on the above sections on the global sustainable development agenda and on social learning, the following two points are central to the analytical framework developed in the second section:

- The **global sustainable development agenda** challenges societies to **meet human development needs while protecting the earth’s life support systems**.
- For the purposes of this analytical framework, **social learning** is defined as **increasing the awareness and enhancing the capacity of social systems to operationalize the global sustainable development agenda**.

There are a number of ways that society can increase its awareness and enhance its capacity to operationalize sustainable development. For example, the global environmental governance and global sustainable development governance debate focus on building the institutional capacity at the international level to implement the sustainable development agenda. International institutions, such as the United Nations Environment Program, form an important feedback structure of that global governance and learning system by providing information about the state of the environment.

One of the greatest challenges put forward by the sustainable development agenda is the challenge of satisfying both conservation goals and poverty reduction goals. Society has not yet learned how to integrate these two imperatives. This analytical framework takes

the position that the Equator Initiative is a manifestation of society's aim to learn how to integrate these two goals. As the following sections will outline, this paper argues that the Equator Initiative can accomplish this through facilitating entrepreneurial activity at the local scale and enabling these entrepreneurial innovations to disseminate through the social system to inform social learning about how to implement sustainable development.

II. THE EQUATOR INITIATIVE AND A FOCUS ON ENTREPRENEURSHIP

The Equator Initiative as a Manifestation of Social Learning to Operationalize Sustainable Development

The global sustainable development agenda established the interconnectedness of conservation goals and goals to reduce hunger and poverty. The greatest concentration of biological diversity can be found in the tropical countries along the equatorial belt; however, these countries are also beset by increasing poverty and by the disempowerment of local and indigenous communities that directly threatens this biological wealth. It is this challenge that triggered the launching of the Equator Initiative as part of the preparations for the World Summit on Sustainable Development and in support of the United Nations Convention on Biological Diversity. The Equator Initiative is a partnership amongst representatives of the United Nations, civil society, business, governments and local groups seeking to reduce poverty while simultaneously conserving biodiversity through fostering and strengthening local community partnerships along the equatorial belt. There are eight international and national organizations working together with the goal of "forging a global movement for poverty reduction and biodiversity conservation" (Equator Initiative website, 2003). The partnership consists of United Nations Development Program, the UN's global development network, with BrasilConnects, the government of Canada, the International Development Research Centre (IDRC), IUCN – the World Conservation Union, The Nature Conservancy, the Television Trust for the Environment (TVE), the United Nations Foundation, and the German Federal Ministry for Economic Cooperation and Development (BMZ).

The Equator Initiative's flagship activity is the biennial Equator Prize. Through this award program, the Equator Initiative seeks to identify and support innovative approaches to achieving the goals of poverty reduction and sustainable use and conservation of biodiversity at the local level. Out of the 420 nominations submitted for the 2002 inaugural Equator Initiative Prize, twenty seven finalists were chosen by a Technical Advisory Committee to be evaluated by an eminent international jury for the selection of the six award recipients. There are a number of motivations behind the award scheme. The prize honors innovations in local partnerships to combine poverty reduction efforts through sustainable use of natural resources. There is also a social learning goal inherent in identifying these innovations as they are demonstrations of the possibility of integrating conservation and human development goals. As Alvaro Umana, Principal Advisor and Leader of UNDP's Environmentally Sustainable Development Group, stated:

“Local communities from throughout the tropical developing world are charting a path towards true sustainable development. Their work is proof that biodiversity conservation and poverty reduction are mutually inclusive aims. The Equator Prize is designed in part to focus global attention upon these local success stories.” (quoted in UNDP Newsfront June 03, 2003)

The Equator Initiative has a goal of creating a “worldwide movement” that would enable the lessons learnt from the Equator Prize recipients to result in increased awareness and improved capability of social systems to be sustainable. Sean Southey, the Equator Initiative manager, expressed this goal in a recent speech. Southey stated that the Equator Initiative is wanting to “lead the way to a better understanding of how conservation efforts can support wider work to achieve sustainable human development”. This will be accomplished “through dedicated efforts to promote linkages between biodiversity conservation and poverty reduction” (quoted in UNDP Newsfront June 3, 2003).

Within the Equator Initiative, raising the profile of sustainable community initiatives is combined with a broader mandate of building the capacity of these communities, stimulating other local grassroots initiatives, facilitating learning exchanges amongst practitioners, and bringing the lessons learnt from these grassroots innovations to a broader community including policy-makers and the public. The Equator Initiative is focusing on seven activities aimed at fostering capacity building within the tropics, and generating and sharing knowledge for effective policy decision making.

- Sponsoring the biennial **Equator Prize**, awarded to recognize outstanding communities from developing countries in the tropics that demonstrate in practical terms how efforts to conserve biodiversity can also reduce poverty,
- Offering **learning exchange** grants so that grassroots practitioners can share best practices with other communities in the tropics,
- Facilitating **eco-entrepreneur mentoring** to provide business and financial advice for small sustainable business startups,
- Assisting **people and protected** areas where communities must balance income generation with the conservation of biodiversity in or near **World Heritage Sites**,
- **Making the community to policy connection** by linking local sustainable development innovations with policies that affect them, and working to ensure communities have the input, political support and funding they deserve,
- Fostering **research and learning** by enlisting networks of experts and practitioners to use community best practices to inform policy and development priorities, and
- Mounting a global **public awareness campaign** to raise the profile of sustainable communities in donor countries and encourage adoption of community best practices in developing regions.

(www.equatorinitiative.org, 2003)

The analytical framework that we are developing in this paper is contributing to the research and learning component of the Equator Initiative's activities. This activity has "the aim of providing knowledge to support a global movement for poverty reduction and biodiversity conservation" (EI website, 2003). The focus of the research, analysis and learning is the Equator Prize nominees and winners that provide "a rich source of information that may be used to better understand those factors that influence the organization of successful initiatives at the local level ... [and] the cross-level linkages between local communities and the decision making process" (EI website, 2003).

There are a number of ways in which the Equator Prize nominees can be analyzed to gain insight into the reasons for their effectiveness. Some analyses focus on developing indicators of biodiversity conservation and poverty reduction to evaluate the ability of the innovations to achieve these goals (Rubian and Crowley, 2003). In this paper, we are proposing that a focus on entrepreneurship is central to understanding the effectiveness of innovations for sustainable development.

Entrepreneurship: A Framework for Analyzing the Equator Initiative and Equator Prize Nominees

Throughout human evolution, local communities have been challenged with adapting to environmental conditions and developing social systems to enable their survival. What makes the nominees for the Equator Initiative unique? First, someone or some social group was motivated to be *entrepreneurial* and seek a resolution to the social, economic and ecological problems they encountered. Second, the process of nominating these innovations places them within the context of *social learning* to operationalize the sustainable development agenda. This requires a broader frame of analysis that incorporates indicators analyzing for their effectiveness in contributing to internationally agreed upon conservation and poverty reduction in addition to indicators on local sustainability and impact.

This analytical framework proposes that the Equator Initiative focus its research and learning activities on entrepreneurship and that it builds its activities around identifying, learning from and nurturing this entrepreneurship. This analysis draws on the literature on innovations in development projects (Korten, 1980; Uphoff et. al., 1997; Alvord et. al, 2003) and on the literature on entrepreneurship (Banuri and Najam, 2002; Alvord et. al, 2003) to define the characteristics of effective innovations for sustainable development. These characteristics can be summarized as follows. Effective innovations for sustainable development:

- are initiated and guided by **entrepreneurs** and **entrepreneurial teams** that are open to learning (learning leaders)
- **develop institutional capacity** to adaptively manage and learn to address problems (adaptive management)
- **increase their capacity to learn over time** through creating learning processes and structures (learning process)
- **expand their influence over time to contribute to increased capacity of larger social systems** to respond to complex sustainable development problems (social learning)

Entrepreneurship

In the lead-up to the World Summit on Sustainable Development, the Stockholm Environment Institute-Boston, the United Nations Environment Program and the RING Regional and International Networking Group produced a seven-volume series entitled *Civic Entrepreneurship* that chronicled over one thousand successful cases of sustainable development in practice. The series was produced through an intense dialogue amongst over 350 civil society practitioners from over 70 countries in an attempt to distill the characteristics of these cases that made them effective. Their central finding was that civic entrepreneurs were central to the effectiveness of the initiatives. The concept of entrepreneur is well developed in the business literature that focuses on the ability of an entrepreneur to create value through innovation (Schumpeter, 1951).

“The Schumpeterian entrepreneur is not necessarily the inventor or the manager or financier – it may just as easily be someone who adopts somebody else’s idea, borrows money from a bank, and hires a manager to put the idea to practical use in a business or factory. Without entrepreneurship, ideas or inventions cannot impact development, sustainable or otherwise. The entrepreneur has the *imagination* to see the potential for profit from the innovation (i.e. the practical application of the technique), the *initiative* actually to carry out the task of introducing the innovation, and a *willingness* to take the calculated risk that the effort might fail and lead to a loss rather than a profit.” (Banuri and Najam, 2002: 4 – emphasis in original)

In a social context, the meaning can vary from the ability to combine commercial enterprise with social impacts, to the ability to innovate for social impact, to the ability to catalyze social transformations (Alvord et. al, 2003). In the *Civic Entrepreneurship* series, the common pattern across the stories of successful sustainable development in practice is “civic will, namely the social commitment and entrepreneurial vision that leads by example, and thus drives political will, induces changes in business practices, creates policy spaces for sustainable development, and produces social capital rather than financial profit (Banuri, 2002). Sustainable development entails “a form of entrepreneurial activity – gap filling or *bricolage* – which aims to produce social capital” (Banuri, 2002). In their paper on *Social Entrepreneurship and Societal Transformation*, Alvord et. al. (2003) highlight the importance of the bridging capacity of entrepreneurs and their ability to bring together, create effective links and work effectively with a diversity of stakeholders engaged in addressing a problem.

Entrepreneurs are required to continually adapt and innovate within the context of shifting circumstances. This requires an iterative relationship between the knowledge system they hold and the actions they take. In his analysis of professionals in the book *The Reflective Practitioner*, Donald Schön makes this distinction when he differentiates between technical knowledge and Reflection-in-Action (Schön, 1983). Schön argues that complex problems can not be addressed by applying technical rationality and technical knowledge but require a process of Reflection-in-Action. In complex situations, the professional, or entrepreneur, is involved in “setting the problem” and “framing the context” of the problem and then conducts experiments to test assumptions and

understanding of the problem. The process of Reflection-in-Action does not differentiate between the implementation of a strategy to address a problem and inquiry as to its effectiveness. In the context of everyday practice, knowledge building, strategic decision making, and implementation are closely integrated. The professional accepts the uncertainty and unique nature of the problems and, rather than simply wanting to understand a problem, the professional is actively engaged in transforming the situation and advancing positive change.

“In the varied topography of professional practice, there is a high, hard ground where practitioners can make effective use of research-based theory and technique and there is a swampy lowland where situations are confusing “messes” incapable of technical solutions. The difficulty is that the problems of the high ground, however great their technical interest, are often relatively unimportant to clients or to the large society, while in the swamp are the problems of greatest human concern. Shall the practitioner stay on the high, hard ground where he can practice rigorously, as he understands rigor, but where he is constrained to deal with problems of relatively little social importance? Or shall he descend to the swamp where he can engage the most important and challenging problems if he is willing to forsake technical rigor? ... There are those who choose the swampy lowlands. They deliberately involve themselves in messy, but crucially important problems and, when asked to describe their methods of inquiry, they speak of experience, trial and error, intuition and muddling through.”

(Schön, 1983)

Entrepreneurs embrace the shifting nature of their work and are engaged in iterative processes of scanning the environment, knowledge acquisition and interpretation, strategy formulation, implementation, monitoring, and adjustment. Knowledge and action are interconnected.

The Innovation and the Learning Process

The entrepreneur initiates a process of creating institutions and mobilizing resources to address a problem. The literature on innovations in development projects and on learning processes can inform our analysis of this process. The centrality of learning in our analysis is a response to the nature of the problems the entrepreneur is faced with. As we have explored at the scale of global sustainable development challenges, social and ecological problems are too complex, rapidly shifting, and interconnected and the outcomes and context too filled with uncertainty to adequately pre-plan and forecast. Blueprint, predetermined strategies to address the problems are not the answer. Instead, an entrepreneurial strategy has to create guidelines for flexible learning processes that emphasize reflection, assessment, scanning for trends, monitoring, adjustments, and institutionalizing the lessons learnt. Sustainable development “involves newness, a new way of pulling things together, new ways of mobilizing resources, building legitimacy, engendering collective action, stimulating economic activity, or adapting technology” rather than adopting a blueprint approach. (Banuri and Najam, 2002).

Before returning to a discussion of the learning process, it is useful to consider the different forms that an entrepreneur can select for their innovation. In their paper on *Social Entrepreneurship and Societal Transformation*, Sarah Alvord, L. David Brown and Christine Letts propose that there are three distinct forms of innovation for development at the local scale (Alvord et. al., 2003). The first is an innovation that builds local capacity by working with and empowering poor and marginalized peoples. The second form of innovation focus on disseminating a package of innovations such as information and technical resources that can be distributed to fulfill a need. Finally, an innovation can focus on building a movement that mobilizes politically-marginalized peoples to challenge repressive and powerful actors and institutions.

Whichever form an innovation takes, the entrepreneur will be faced with the challenge of mobilizing people and resources and creating institutional structures to address the identified problem. The way that these institutions are designed and resources are mobilized is critical to the effectiveness of the innovation. Because of the complex nature of the problem, the dynamic and unpredictable systems which the entrepreneur is trying to influence, the shifting landscape of actors and their actions, and the necessarily partial state of knowledge, an effective entrepreneur will engage in an adaptive management approach that integrates “design, management and monitoring to systematically test assumptions in order to adapt and learn” (Salafsky et. al, 2001: 8). This enables internal learning and adjustments as the innovation proceeds. Alvord et. al. (2003) also emphasize the importance of continuous learning within individuals and the organizational structures to the effectiveness of an innovation

David Korten (1980) argues that there are a series of higher order phases that can be identified in the development of a successful innovation. The innovation begins with a phase in which it is “learning to be effective”. During this phase, the entrepreneur is testing out assumptions, experimenting and implementing a variety of strategies to find one that suits the nature of the challenge. The entrepreneur iterates through the conceptual and action steps outlined above. Once an effective strategy is identified, the entrepreneur moves into the phase of “learning to be efficient” in which those effective strategies are routinized by establishing institutional structures that carry out the effective strategies. Korten’s final phase is the phase of “learning to expand” from the initial initiative size to scale up the activities to a broader constituency. This final phase is reflected in the Equator Initiative criteria for judging the Equator Prize. The local partnerships are evaluated based on the transferability of their innovations. When an innovation is deemed to be effective, it is replicated and imitated by other communities or the lessons are transferred into policy.

Alvord et. al. develop a detailed description of this phase of expansion which they term “scaling-up and societal transformation” (Alvord et.al, 2003). They propose that expanding the impacts of an innovation can either be accomplished by investing and growing an innovation’s organization and management systems or by investing in building networks and alliances with other actors to share operational activities. Alvord et. al. draw on the work of Peter Uvin and his colleagues in differentiating between distinct patterns for widening the impact of successful social entrepreneurship

innovations: “(1) Expanding coverage to provide services and benefits to more people; (2) expanding functions and services to provide broader impacts to primary stakeholders; and (3) initiating activities that change the behavior of other actors with wide impacts and scale-up impacts indirectly” (Uvin, Jain and Brown, 2000 as summarized in Alvord et. al.. 2003).

In addition to scaling-up their activities, Alvord et. al highlight three different kinds of transformation leverage, “different arenas of primary stakeholder experience that can be affected by socially entrepreneurial ventures” (Alvord et. al., 2003). The primary transformation leverage can be economic, political or cultural. The societal transformation leverage seeks to trigger shifts in patterns of interaction amongst the actors in society in order to create a supportive and facilitative environment for entrepreneurship and for these types of innovations to address sustainable development problems. It is in this expansion and societal transformation phase of an innovation’s learning process that we can return to the concept of social learning. As society is grappling with how to implement the global sustainable development agenda, the local level innovations provide critical information into this social learning process. The entrepreneurs provide invaluable insight into the barriers and opportunities that they encounter during the learning process and the shifts in patterns of interactions and cultural norms that are necessary to advance the global sustainable development agenda.

The Equator Initiative as an Incubator

Since the Equator Initiative has the broader goal of triggering a worldwide movement to impact policy at the local, national and global levels and create an enabling environment for the implementation of sustainable development, we propose that the Equator Initiative focus on nurturing and facilitating entrepreneurship. In *Civic Entrepreneurship*, Tariq Banuri and Adil Najam propose four ways that civic entrepreneurs can be assisted: by listening to them, by learning from them, by propagating their work, and by nurturing their actions (Banuri and Najam, 2002). Within the discussion on nurturing civic entrepreneurship, Banuri proposes that it is possible to learn from the private sector in terms of how to invest and nurture entrepreneurship. Banuri draws a distinction between clients and venture capitalists in terms of investments in new and innovative companies. Clients invest in predictable and deliverable goods and services whereas venture capitalists invest in people, ideas, innovation, experimentation and change. Banuri argues that civic entrepreneurs need to be nurtured by the equivalent of civic venture capitalists. This requires a search for civic entrepreneurs and “latent civic will” rather than for clearly specified deliverable services and products (Banuri and Najam, 2002: 123). The sharing of civic entrepreneurial stories needs to be combined with facilitative programs that enable new entrepreneurs to start innovations. The Equator Initiative needs to encourage a subset of donors to encourage and nurture civic entrepreneurship for social enterprise as if they were venture capitalists. It will require further understanding of how civic entrepreneurs are nurtured but it can start with investments in those individuals or groups that express the desire to be agents of change. This type of investment is risky as the outcomes are not always guaranteed; however, the risks are worth the potential benefits.

Banuri continues by proposing that one of the ways of nurturing civic entrepreneurship is to develop 'incubators'. The Equator Initiative can be analyzed as to whether or not it is fulfilling these incubator services.

“In searching for practical measures to invest in civic entrepreneurs, we can learn much from the emerging literature on business ‘incubators’ (Hansen et al, 2000). In the business world incubators are becoming a powerful vehicle for encouraging the spirit of entrepreneurship in high-risk and potentially high-reward areas by providing an alternative to traditional venture financing. Incubators provide services such as office space, coaching, seed funding, information technology, public relations, recruiting, legal advice, accounting services, pooled buying programs, and organized networking to budding entrepreneurs and therefore can enter the process at a level before the entrepreneur ‘matures’ for the venture capitalist. More importantly, incubators nurture entrepreneurs by investing not only in their ideas but also in their development. They encourage new entrepreneurs and, because of their structure, can invest in more of them than regular venture capitalists...the incubator model has much to offer to civic investors. Incubators can serve as networks of support and encouragement for tomorrow’s generation of civic entrepreneurs. There is much that needs to be learned from this model and how it can be adapted to the task of nurturing civic entrepreneurs and civil will”

(Banuri and Najam, 2002: 124)

SUMMARY

This analytical framework has outlined the urgency of operationalizing the global sustainable development agenda. Society has not learned how to effectively advance this agenda and has not raised the awareness or enhanced the social capacity to adequately match the complex and dynamic nature of the challenge. Implementing sustainable development will require a diversity of strategies across scales, regions and timeframes. Common to all of the strategies will be a requirement to learn as knowledge will always be partial and there will always be uncertainty as to the consequences of any particular action.

The Equator Initiative is a manifestation of society’s aim to learn how to simultaneously address human development needs and preserve the Earth’s life support systems. It is contributing to this learning process by actively identifying local innovations that have successfully combined conservation and poverty reduction goals. In addition to raising the profile of these innovations, it is actively engaging in learning from their successes, facilitating exchanges amongst the practitioners, and propagating the story of their innovation to other communities and policy-makers. This analytical framework presents the notion of ‘entrepreneurship’ as being central to understanding the success of the innovations nominated for the Equator Prize. The Equator Initiative has a role to play in encouraging the emergence and nurturing of entrepreneurs. In addition to understanding

the process of entrepreneurship, the analytical framework evaluates these innovations in light of the need to trigger societal transformation towards sustainable development and enhance social learning on how to operationalize the sustainable development agenda.

Works Cited

Abramowitz, Moses (1986) "Catching Up, Forging Ahead, and Falling Behind" in the *Journal of Economic History*, 46:385-406.

Alvord, S. H., L.D. Brown and C.W. Letts (2003) "Social Entrepreneurship and Societal Transformation: An Exploratory Study" Hauser Center Working Paper No. 15, http://www.ksg.harvard.edu/hauser/active_backup/PDF_XLS/workingpaper_15.pdf

Annan, K. (2000) *We the Peoples: the Role of the United Nations in the 21st Century*. UN Secretary General Kofi Annan's Millennium Report to the General Assembly. [A/54/2000] <http://www.un.org/millennium/sg/report/>

Argyris, C. & D. A. Schön (1996) *Organizational learning II: theory, method, and practice*. Reading, MA: Addison-Wesley Publishing.

Bandura, A. (1977) *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

Banuri, T. and A. Najam (2002) *Civic Entrepreneurship: A Civil Society Perspective on Sustainable Development*. Islamabad, Pakistan: Gandhara Academy Press.

Botkin, J.W., M. Elmandjra and M. Malitza (1979) *No Limits to Learning: Bridging the Human Gap*. A Report to the Club of Rome. Exeter, UK: A. Wheaton and Co. Ltd.

Brown, L.D. (1999) "Social Learning in South-North Coalitions: Constructing Knowledge Systems across Social Chasms" in David Lewis (ed) *International Perspectives on Voluntary Action*. London, UK: Earthscan.

Brown, L.D. and J. Covey (2000) "Critical Cooperation: An Alternative Form of Civil Society-Business Engagement" in *IDR Reports: A Continuing Series of Occasional Papers*. Boston: Institute for Development Research.

Clark, W.C. (2001) "Social Learning" in Goudie, A.S. and D.J. Cuff (Editors), 2001. *Encyclopedia of Global Change: Environmental Change and Human Society*. Oxford University Press, Oxford.

Cross, Rob, Wayne Baker and Andrew Parker. (2003) "What creates energy in organizations?" in *MIT Sloan management review*. vol. 44, issue 4: pg. 51

Easterby-Smith, M. and L. Araujo (1999) "Organizational Learning: Current Debates and Opportunities" in M. Easterby-Smith, L. Araujo and J. Burgoyne *Organizational*

Learning and the Learning Organization: Developments in Theory and Practice.
London; Thousand Oaks; New Dehli: Sage Publications.

Equator Initiative (2003) website: www.equatorinitiative.org

Finger, Matthias and Philomene Verlaan (1995) 'Learning Our Way Out: A Conceptual Framework of Social-Environmental Learning' *World Development*, Vol.23, No. 3. Pp. 503-513.

Greenleaf, R.K. (1973) *The Servant as Leader*. Cambridge, MA: Center for Applied Studies

Hoffman, A. J. (2001) *From Heresy to Dogma: An Institutional History of Corporate Environmentalism*. Stanford, US: Stanford University Press.

Homer-Dixon, T (2000) *The Ingenuity Gap*. New York, USA: Knopf.

Huber, G. P. (1989) *Organizational Learning: An Examination of the Contributing Processes and a Review of the Literature*. Paper Presented at the Conference on Organizational Learning, Carnegie-Mellon University, May 18-20.

Kahane, A. (2003) "The Potential of Talking and the Challenge of Listening" in *Changing our Organizations to Change the World: Systems Thinking in Action – The Handbook of the 13th Annual Pegasus Conference*. Vermont, USA: Pegasus Communications: 33-35.

Korten, D. C. (1980) "Rural organization and rural development: A learning process approach" *Public Administration Review*, Sept/Oct: 480-511.

Korten, D. C. (1981) "The Management of Social Transformation " *Public Administration Review*, Nov/Dec: 609-618.

Lave, J. and E. Wenger (1991) *Situated Learning: Legitimate peripheral participation*. Cambridge, UK: University of Cambridge Press.

Levitt, B. and March, J.G. (1988) "Organizational Learning" in *Annual Review of Sociology*, 14: 319-40.

Meadows, D.W., D.L. Meadows, J. Randers and W.W. Behrens III (1973) *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. New York, USA: Universe Books.

Milbrath, L.W. (1989) *Envisioning a sustainable society: learning our way out*. Albany, NY: State University of New York Press.

Risse, T. S. C. Ropp and K. Sikkink (eds) (1999) *The Power of Human Rights: International Norms and Domestic Change*. Cambridge, UK; New York, US: Cambridge University Press.

Rotter, J. B. (1954) *Social Learning and Clinical Psychology*. New York, US: Prentice-Hall.

Rubian, R. and J. Crowley (2003) "Poverty Livelihood and Biodiversity Conservation Nexus: An Analysis of the Equator Initiative's Award Recipients" presented at the 2003 *Open Meeting Human Dimensions of Global Environmental Change Conference*. Montreal, Canada: 16-18 October.

Salafsky, N., R. Margoluis and K. Redford (2001) *Adaptive Management: A Tool for Conservation Practitioners*. Washington, D.C.: Biodiversity Support Program.

Salomon, G. and D. N. Perkins (1998) "Individual and Social Aspects of Learning" in *Review of Research in Education*. Volume 23.

Salomon, G (ed.) (1993) *Distributed Cognition: Psychological and Educational Considerations*. Cambridge, UK: University of Cambridge Press.

Schön, D. A. (1983) *The Reflective Practitioner: How Professionals Think in Action*. London, UK: Temple Smith.

Schumpeter, J. A (1951) *Essays: On entrepreneurs, innovations, business cycles, and the evolution of capitalism*. R. V. Clemence (Ed.). Cambridge: Addison-Wesley.

Senge, P (1990) *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday/Currency.

Senge, P. (1990b) "The Leader's New Work: Building Learning Organizations" in *Sloan Management Review* (Fall 1990): 7-23.

The Social Learning Group (2000) *Learning to Manage Global Environmental Risks: A Comparative History of Social Responses to Climate Change, Ozone Depletion and Acid Rain*. Cambridge, MA; London, UK: MIT Press.

UNDP Newsfront (2003) "At Berlin celebration, Equator Prize calls for 2004 award nominations". 13 June 2003.
<http://www.undp.org/dpa/frontpagearchive/2003/june/13june03/index.html>

Uphoff, N., M. J. Esman & A. Krishna (1998) *Reasons for success: Learning from instructive experiences in rural development*. West Hartford, CT: Kumarian Press.

Uvin, P., P. S. Jain & L. D. Brown (2000) "Think large and act small: Toward a new paradigm for NGO scaling up". *World Development*, 28(8).

Viotti, Eduardo B. (2001) "National Learning Systems: A New Approach on Technological Change in Late Industrializing Economies and Evidences from the cases of Brazil and South Korea" in *Technological Forecasting and Social Change*. 69:653-680.

Weick, K. (1979) *The Social Psychology of Organizing* (2nd Edition). Reading, MA; Menlo Park, CA; London; Amsterdam; Don Mills, Ontario; Sydney: Addison-Wesley Publishing Co.

Wenger, Etienne (1998) *Communities of Practice: Learning, Meaning and Identity*. Cambridge University Press, Cambridge.

World Commission on Environment and Development (1987) *Our Common Future*. Oxford, UK: Oxford University Press.

World Summit on Sustainable Development (2002) *Plan of Implementation*. New York, USA: United Nations.

APPENDIX A: 2002 EQUATOR PRIZE FINALISTS

Criteria for selection of 2002 Equator Prize finalists::

<ul style="list-style-type: none"> • Impact: Initiatives that have reduced poverty through the conservation and sustainable use of biodiversity, and/or through the equitable sharing of the benefits resulting from the use of genetic resources. • Partnerships: Initiatives that have adopted a partnership approach through linking activities with non-governmental organizations, community-based organizations, the private sector, governments, research and/or academic institutions, and public or private foundations. • Sustainability: Initiatives that can demonstrate at least three years of successful and lasting changes in local socio-economic conditions and have positive impacts on biodiversity. • Innovation and transferability: Initiatives demonstrating new and adaptable approaches that overcome prevailing constraints and offer relevant knowledge, expertise and lessons learned. • Leadership and community empowerment: Initiatives demonstrating leadership that has inspired action and change consistent with the vision of the <i>Equator Initiative</i>, including policy and/or institutional change and local people's empowerment, especially that of marginalized groups. • Gender equality and social inclusion: Initiatives that incorporate diverse social and cultural needs and promote social equality and equity.
--

Equator Prize Finalists 2002:

Cellule d'Appui a la conservation et au Initiatives de Developpement Durable (CACID)	Cameroon, Africa - A regional NGO working in a flood zone that includes a UNESCO Biosphere Reserve (Parc National de Waza) rallied all stakeholders in a partnership to restore water and conserve the plain through natural resource management plans and micro eco-development projects.
Parc Marin de Mohéli	Comoros, Africa – Communities in an important marine biodiversity area of this very small nation of islands located between Mozambique and Madagascar organized to establish and now co-manage a marine park reserve that is helping to restore biological diversity and is protecting the marine resources that provide sustenance and livelihoods for the community. Villagers were directly responsible for setting up the co-management plans and ensure they are carried out through monitoring by their ecoguards and follow up by local environment associations. The consequence has been improved incomes for fisheries, visible improvement in ecological conditions and new opportunities associated with ecotourism.
Honey Care Africa Ltd.	Kenya, Africa – Honey Care is a private sector initiative working together with NGOs, the development sector and grass-root communities in a symbiotic 'win-win' partnership that links environmental conservation and poverty reduction through a model of sustainable bee keeping by providing bee hives to rural communities and subsistence-level farms in Kenya and by guaranteeing to buy the honey produced.
* Il Ngwesi Group Ranch	Kenya, Africa – Il Ngwesi, a 16,500-acre group ranch in northern Kenya owned collectively by the 448 Nnrobo Maasai households (6000 people) that inhabits its diverse eco-systems, is a community-based initiative based on conservation, development and ecotourism. The group ranch's full patrolling and control of poaching is providing major wildlife and ecological benefits, permitting joint protection (with the adjacent Lewa Wildlife Sanctuary) of over 61,500 acres of varied habitat, and influencing neighbouring communities with its success.
FITEMA (Flkambanan'ny TERak'i MANambolo – Association of	Madagascar, Africa – A community-based natural resource management initiative that re-established a traditional indigenous land use system to help preserve the 5,100 ha of mid-altitude forests and 400 ha of swamps in the 7,500 ha Manambolo Valley and provide food security to the local Betsileo ethnic

Manambolo Natives)	group.
Hifadhi Ardhi Shinyanga (HASHI)	Tanzania, Africa – The United Nations Development Programme has recorded successful initiatives such as the Hifadhi Ardhi Shinyanga (HASHI) project. In Tanzania, the community-based soil conservation project (HASHI) has been successful in reversing land degradation through a revival of traditional forms of conservation. Through the project's work, people have been able to reestablish their traditional Ngitili system of land management with significant improvements for both the environment and the livelihoods of communities. Through the Ngitili system of enclosures, farmers close off certain areas to allow for regrowth. This prolongs the availability of fodder during dry periods to better ensure the survival of their cattle. Restored areas now support sustainable production of more food products, including fruits, meat, and milk and commercial products such as gum and honey. The income generated through the sale of these products has been reinvested in better housing, classrooms, dispensaries, latrines, farming implements, and small business. More tree varieties have been planted, soil conditions have improved, wells have been restored, and households now spend less time away from their farms searching for food and water. There has been a notable regrowth of tree species and medicinal plants and the return of species to the arid region, including bird and butterfly species.
* Suledo Forest Community	Tanzania, Africa – The nominee is an organization of nine local communities that have established land use management plans run by villagers and recognized by law. Spurred to action in the face of governmental plans to gazette the land for timber purposes, the villagers came together to claim and manage their own lands for their continued subsistence. The initiative is proving successful in overcoming problems associated with previous unsustainable practices, assuring better grazing, water supplies, and food security because of the healthy maintenance of their local environment and the legal recognition of their own sustainable management plans.
* Fiji Locally-Managed Marine Area Network	Fiji, Asia and the Pacific – The nominee is a network of community-based initiatives that have adopted traditional 'tabu' areas as part of their local management of community-owned fishing grounds and marine protected areas, which include mangroves and coral reefs. They share data and learning experiences, have set up funds for sharing income among community members, and are noticing increased yields in clams and other species. The network's initiatives now affect about 10% of the inshore marine area of Fiji.
Medicinal Plants Conservation Centre (MPCC)	India, Asia and the Pacific – A local NGO (Rural Communes) runs the Medicinal Plants Conservation Centre (MPCC), working in partnership with government Forest Departments, NGOs and local village communities to promote the <i>in situ</i> conservation of the medicinal plants diversity of Maharashtra State. The initiative provides improved access of local people to a broader range of medicinal plants and in the process, enlists their direct involvement in conservation.
Kerala Kani Samudaya Kshema Trust	India, Asia and the Pacific – This initiative is an internationally acclaimed model for equitable benefit sharing between a scientific institution and the Kani semi-nomadic tribal people of the southern Western Ghat forests of Kerala. They imparted their traditional knowledge about the energizing properties of a wild plant to Dr. P. Pushpangadan and with his help, set up a trust for the community to manage the financial benefits of the product he developed.
Tribal communities of the Jeypore tract of Orissa, India/M.S. Swaminathan Research Foundation(MSSRF)	India, Asia and the Pacific – The nominee is an association of 8 tribal communities in partnership with the M.S. Swaminathan Research Foundation (MSSRF). The initiative relates to agro-biodiversity conservation and the development of community gene management systems by indigenous communities and NGOs. It combines <i>in-situ</i> , on farm conservation by farmers who participate in plant breeding and compiling community biodiversity registers with seed and grain banks. The initiative is also involved in community

	medicinal plant gardens and forest management as well as exhibition and sales of non-timber forest products.
* Uma Bawang Resident's Association (UBRA)	Malaysia, Asia and the Pacific – This organization represents a small community (about 100 people) that has been successful in establishing and defending customary land rights to prevent logging, especially through an innovative initiative to map and defend in court traditional land boundaries. It is providing leadership for other communities in Sarawak to do the same. It has helped communities improve income through developing over a dozen different projects, mostly based on farming, which are aimed at providing income from conservation and stemming out-migration.
Community Based Integrated Rural Development (CBIRD) Center - Sub Tai	Thailand, Asia and the Pacific – CBIRD Sub Tai is a community based organization that operates in 6 villages (population about 3,000) in North Eastern Thailand along the southern border of the Khao Yai National Park, Thailand's oldest and most famous national park. It helped to create Environmental Protection Societies (EPS) to resolve local issues of poverty and environmental degradation, such as indebtedness and lack of appropriate farming techniques on steep slopes.
* Toledo Institute for Development and Environment (TIDE)	Belize, Latin America and Caribbean – TIDE is a local NGO that implements the Maya Mountain Marine Sustainable Livelihoods Initiative. The initiative covers a mountain to sea corridor. It works with local communities to enable them, through training, to adopt more sustainable methods of fishing and farming and to develop small-scale ecotourism ventures. With community participation, it co-manages two national parks with the Belize government.
Couro Vegetal da Amazônia Project	Brazil, Latin America and Caribbean – The nominee is a local community partnership working with over 200 indigenous and rubber-tapper families in the Brazilian Amazon to produce sheets of rubber, vulcanized through an exclusive process, to be used as a leather alternative for manufactured articles. It sells rubber fabric sheets to large corporations and finished bags and accessories to Brazilian retail outlets, bringing added income to Amazonian communities through the sustainable use of native rubber trees.
* Associação Vida Verde da Amazônia – AVIVE	Brazil, Latin America and Caribbean – This local women's NGO is using traditional knowledge for the craft production of essential oil and glycerine products marketed as cosmetics, soaps, and perfumes to tourists and eventually for wider distribution. The essences are extracted from the leaves and branches of trees, rather than from the unsustainable harvesting of the whole, sometimes rare tree.
Bolsa Amazonia	Brazil, Latin America and Caribbean – This is a regional enterprise dedicated to developing adapted and small-scale enterprises in rural forest communities of Amazonia that link strategies to meet basic needs food security to the sound use of natural resources in forest regions. Bolsa Amazonia provides crucial links to foreign markets while building capacity through training in sustainable agriculture, agro-industrialisation, and market access.
Cooperativa Dos Produtores De Ostras De cananéia	Brazil, Latin America and Caribbean – A partnership between a traditional community and a cooperative of oyster extractors, this initiative manages an extractive reserve of 1200 ha where the mangroves are protected. It is developing oyster nurseries and growing methods, treating harvested oysters according to health regulations, engaging in management techniques that promote the growth of oysters, and developing criteria for a green seal to market oysters at a premium. The better market price permitted a decrease of collection efforts in the mangrove forest.
Inter-Institutional Consortium for Sustainable Agriculture on Hillsides – the River	Colombia, Latin America and Caribbean – ASOBESURCA is consortium of local community groups who own collective lands operating in a watershed comprising 23 communities of <i>mestizo</i> farmers where 6,500 people, predominantly indigenous <i>Paez</i> , live. The components of the many projects include research, local organization, production, training, technical assistance and

Cabuyal Watershed Users Association (CIPASLA - ASOBESURCA)	natural resource management aimed at reducing poverty through sustainable production and income generation. The regional consortium (CIPASLA) provides various inputs, including access to scientific expertise.
Empresa Forestal Integral de Bayamo, initiative "Fincas forestales ecologicas"	Cuba, Latin America and Caribbean – The <i>Fincas forestales ecologicas</i> (Ecological forest holdings) are designed to improve management of natural resources in order to protect the hydrology of the region, increase species health and diversity and create employment for local communities. 55 <i>fincas forestales</i> of approximately 25 ha each have been created and assigned to families for a period of 30 years. Each family has been given a fuel-efficient stove, a photovoltaic panel for electricity and a television. Families reforest their own lots with trees provided by the Province. The agricultural and agroforestry products of the fincas are sold by the families or used for their own consumption. Training is provided in forest resource management and administration. This initiative began in 1998.
Organización manejo y conservación (OMYC) and Wildlife Conservation Society (WCS)	Guatemala, Latin America and Caribbean – OMYC and the World Conservation Society (WCS) work in a collaborative and synergistic partnership with a community of 180 families to manage a forest concession located in the Maya Biosphere Reserve for FSC certified timber, and non-timber forest products. The largest community-based concession in Guatemala, within the largest protected area in Mesoamerica, it is an important anchor of the Mesoamerican Biological Corridor. The concession is notable in that a substantial annual forest concession fee is being paid to the government from revenues based largely on NTFP.
Unión de Ejidos de la Selva y Café de la Selva	Mexico, Latin America and Caribbean – Unión de Ejidos de la Selva is an association of indigenous communities in Chiapas that has developed a successful coffee retail chain, Café de la Selva. The upmarket cafés serve and sell organic shade-grown coffee. As the chain is owned by the community association, the majority of the returns go directly to the producers.
Programa de Campesino a Campesino (PCaC)	Nicaragua, Latin America and Caribbean – Nicaragua’s Programa Campesino a Campesino or PCaC (small farmer to small farmer program) was initiated in the late eighties by the Unión Nacional de Agricultores y Ganaderos (UNAG), the national union of farmers and ranchers, in collaboration with Mexican partners. In 1992 PCaC Siuna began a pilot effort to use legumes grown in association with maize in order to improve production and therefore arrest expansion of the agricultural frontier in the buffer zone of the Bosawas Biosphere Reserve (World Heritage Site). This initial project has evolved into a wide-ranging social transformation with new organizational structures and development of a number of sustainable development initiatives. Campesino to campesino (and community to community) exchange and networking (in which 300 campesino trainers work with 80 communities and more than 3,000 families) has culminated in the idea of a campesino biological corridor through the buffer zone.
Ese’aja Community	Peru, Latin America and Caribbean – The nominee is a local indigenous (Ese’aja) community in Amazonian Peru, which is engaged in a tourism joint venture with a private ecotourism company, Rainforest Expeditions. Through the joint projects, the community has enjoyed improved quality of life based on ecotourism revenues earned through the operation of Posada Amazonas, a 30-bedroom lodge.
* The Talamanca Initiative	Costa Rica, Latin America and Caribbean – The nominee is a partnership of over 20 grassroots, community-based organizations, many small-scale producers, and the Costa Rican Ministry of the Environment to support the integration of biodiversity and ecosystem conservation, sustainable socio-economic development, and community development, including training and education, organizational development and advocacy/sharing in the Talamanca region of southeast Costa Rica. It operates in the Amistad International Peace Park and its area of influence, which is a UNESCO World Heritage Site, but also collaborates

	with other conservation NGOs to protect the larger Talamanca-Caribbean Biological Corridor region of which the WHS is a key part. The main income-generating activities are ecotourism (sea-turtle), agro-ecosystem production, including organic crop diversification, and local processing.
Asociacion de Comunidades Forestales de Petén (ACOFOP)	Guatemala, Latin America and Caribbean – ACOFOP is an association of about 20 community-based organizations covering thirty rural communities in the buffer zone of the Maya Biosphere Reserve. Two of the communities are adjacent to the Tikal National Park, a World Heritage site. This initiative has ensured community access to and the sustainable management of the forest through securing legal community-based forest concessions for sustainable timber and non-timber forest product extraction and improved livelihoods.
Mosquitia Pawisa (MOPAWI)	Honduras, Latin America and Caribbean – This is a local NGO effort involving Miskito, Garifuna and Mestizo inhabitants around the Rio Platano Biosphere Reserve /World Heritage Site to protect natural values and develop sustainable production through a combination involving agro-ecology, community forestry, eco-tourism, marine protection, micro-enterprises, and advocacy for land and resource rights. MOPAWI acts as a facilitator for the communities, operating by fostering local organizational and institutional capacity, proactive approaches to development by communities, and micro-business funding, especially for women's groups.

APPENDIX B: METHODOLOGY AND RESEARCH QUESTIONS

Methodology:

The analytical framework outlined above will be presented and sent out to selected reviewers for comment. The final analytical framework will be presented at a workshop at the Conference of the Parties for the Convention on Biological Diversity in February of 2004. The method of inquiry for this study is case study research. The draft research questions outlined below will be further refined over the upcoming few months. In addition to being drawn from the research undertaken to develop the analytical framework, the research questions were also drawn from similar studies undertaken by the Knowledge Systems for Sustainable Development Research Project, International Development Research Centre, University of Manitoba, and the Stockholm Environment Institute – Boston. These questions will be sent as a survey to key representatives of the finalist local partnerships of the 2002 Equator Initiative Prize. Five of these cases will be selected for further analysis and follow-up telephone interviews.

Research Questions

Entrepreneurship:

- Who initiated this initiative?
- If there are more than one individual involved in initiating the initiative – what are their relationships with each other?
- What were the institutional origins and arrangements of this initiative?
- What concepts or ethical imperatives provided the motivation for the initiative in the first place? Why did the individuals choose their particular course of action? What were their motivations? Why was the initiative not attempted before?
- Which individuals were instrumental throughout this initiative? Who were the key catalysts in the community? What are their names? What is the background of these individuals?
- Did this individual / these individuals' role change over time?
- Who else was instrumental in this initiative as it developed? Were there other leaders? What are their names? What was their background? What was their relationship to the initiators?
- What is the managerial history of this initiative? In what way were these activities pushed or guided?
- What did leaders do to manage the different actors involved?

Learning:

Adaptive Management (from Salafsky, Margoluis and Redford, 2001)

- Did the initiative establish a clear and common purpose? What processes did it use to do so?
- Did the initiative scan the external and internal conditions and design an explicit model of the system they were dealing with? How did the initiative do this?
- Did the initiative develop a management plan that maximized results and learning?
- Did the initiative develop a monitoring plan to test its assumptions?
- Did the initiative implement the management and monitoring plans?
- Did the initiative analyze data and communicate results?

- Did the initiative use the results to adapt and learn?

Learning Process (Korten, 1980, Uphoff et al., 1998, Banuri and Najam, 2002)

- Has the initiative established long-term learning processes and structures?
- Did the initiators experiment and test out ideas during their initial period of the initiative? Were there any failed experiments? What was the response to failure?
- Did the initiative facilitate curiosity and innovation?
- Were there previous attempts at solving the problem the initiative face? What did the initiative learn from these?
- Did the initiative focus on solving a particular problem or did it create a long-term orientation? Does it attempt to undertake both tasks?
- Were there any surprises during the initiative? How did the initiative respond?
- Were there any crises? How did the initiative respond?
- How did the initiative respond to scientific, environmental or political change?
- What opportunities did the initiative take advantage of?
- What obstacles did the initiative face?
- Did the initiatives demonstrate new and adaptable approaches that overcame prevailing constraints
- Did the initiative offer relevant knowledge, expertise and lessons learned through outreach projects?
- Did the initiative's innovations spread to other communities? If so, how were the lessons scaled up and out?
- Were there learning networks? (self-organized groups consisting of people from different organizations, who are engaged in problem-solving, subsequently recycling their experience to tackle new problems)?

Knowledge: (Knowledge Systems for Sustainable Development)

- What kinds of information was produced and used in the initiative? Who used the information? How were they linked? Were there any gaps?
- What were the main sources of knowledge for the initiative? (Local/Indigenous, scientific, other)?
- What are the actors that make up the knowledge system? What capacities do they have?
- Who were the providers of local knowledge?
- Did the knowledge system evolve over time?
- What capacity or training did the initiative engage in? Who provided this training and capacity building?
- Were the technologies / approaches used new to the community and, if so, where did they come from?
- Were there any controversies about the credibility or legitimacy of the knowledge?
- How did the initiative facilitate the gathering of relevant / salient knowledge?
- Were there any knowledge products that were co-produced for the initiative? What impact did these have?

Social Learning (Clark, 2001; Brown, 1999; Milbrath, 1989; Botkin et al, 1979; Finger and Verlaan, 1995, Knowledge Systems for Sustainable Development Research Project)

- To what degree were the social, economic and environmental issues addressed in an integrated fashion?
- What kind of structures facilitated integration? Were there barriers to the integration?
- Were there changes in patterns of interaction amongst the actors involved in the initiative?
- Did the initiative build social capability within the community? In the external actors (government, private sector)?
- Did the initiative lead to institutional change?
- Did the initiative lead to policy changes and, if so, how did they come about?
- Did the initiative link to any international program or initiative?
- How is the initiative contributing to global learning about implementing sustainable development?

UNDP Equator Initiative Awards Ends with Surprise Announcement

United Nations (New York)

NEWS – allAfrica.com

August 31, 2002

Posted to the web September 2, 2002

Johannesburg

The United Nations Development Programme held its first Equator Initiative Awards last night for community-based partnership initiatives aimed at promoting sustainable development, and, as it turned out, there were more winners than the organizers expected.

The Equator Initiative, a partnership in its own right between UNDP and seven other groups, had intended to award the six best initiatives from a field of 27 a \$30,000 prize. But after announcing the six winners, the Nature Conservancy President Steve McCormack announced, in a spontaneous gesture, that it would award all 27 projects the prize of \$30,000.

"This caught us all by surprise," according to Jason Spensely, an Institutional Development Specialist with the Nature Conservancy. "It wasn't planned at all," adding that the money would go to the communities to use for further sustainable development.

UNDP Administrator Mark Malloch Brown, who had initially compared the awards ceremony to an Oscar's night, said, "This is a wonderful spontaneous gesture that will live on well beyond the Summit."

From preserving forests in Tanzania to maintaining indigenous knowledge in Brazil, protecting endangered species in Kenya, and restoring marine life in Fiji, the initiatives are examples of successful community initiatives that have promoted income generation while pursuing sustainable development.

"This is what the World Summit on Sustainable Development is all about," according to Malloch Brown. "It's not about the global community talking endlessly about standards and obligations. Sustainable development is done individual-by-individual, community-by-community. It's about confronting common problems in communities by people innovating solutions on their own."

The Equator Initiative concentrates its efforts on the 116 countries lying between the Tropics of Cancer and Capricorn, or 23.5° N and 23.5°S, where, one of the Initiative's chief organizers, Charles MacNeill, said most of the world's biodiversity is found.

The Initiative started was conceived during conversations between Malloch Brown and United Nations Foundation President Tim Wirth last year. Wirth said the highlighted initiatives were about "great people doing great things around the world."

In addition to UNDP and the UN Foundation, other members of the initiative include BrasilConnects, the International Development Research Centre, the World Conservation Union (IUCN), the International Development Research Centre in the government of Canada, Television Trust for the Environment (TVE) and The Nature Conservancy (TNC).

From a field of 420 submissions, the field was narrowed to 27 finalists and ultimately, the six winners were unanimously selected by a jury of distinguished personalities. Representatives of all 27 representatives were present at the award dinner, and each received a certificate from Yolanda Kakabadse, President of IUCN, who remarked that "it's funny, coming from Ecuador, we always thought we owned the Equator."

The six winners included the Il Ngewsi Group Ranch in Kenya, a ranch of 499 local households which has been successful in reducing local poverty and conserving biodiversity through ecotourism and the establishment of a community owned trust for local land management. In Tanzania, the Suledo Forest Community has adopted village-based forest management that has helped meet the needs of the community, and in Fiji, the Locally-Managed Marine Area Network has extended its authority to 10 per cent of Fiji's inshore marine area, and has helped boost fish catches.

In Malaysia, the Uma Bawang Resident's Association in Sarawak has used mapping techniques to defend their land claims and has promoted many income generating activities, while in Belize, the Toledo Institute for Development and Environment has engaged in sustainable forestry through eco-labeling programmes. And from Brazil, the Green Life Association of Amazonia was honored for its work in developing techniques for the sustainable extraction of the Aniba plant, which is used for medicinal and cosmetic purposes.

The Talamanca Initiative won an award as a World Heritage Site for its work in promoting biodiversity conservation and socio-economic development in the Talamanca Region of Costa Rica.

Copyright © 2002 United Nations. All rights reserved. Distributed by AllAfrica Global Media (allAfrica.com).